MASTER PLAN
SOUTH MOUNTAINS
STATE PARK

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SOUTH MOUNTAINS STATE PARK MASTER PLAN

burke & cleveland counties, n.c.

Prepared By:
The State of North Carolina
Department of Natural Resources
and Community Development
Division of Parks and Recreation
Master Planning Unit
January, 1979

FOREWORD

The primary objective in preparing a master plan document is to set forth a long-range plan and program for a park's development and management. The planning process utilized for South Mountains State Park strives to achieve a balance of recreational and natural elements, taking into consideration resource carrying capacity and the need for park protection. The plan is designed for implementation in phases, allowing for uninterrupted park use and periodic reevaluation. Thus, the plan is flexible inasmuch as development need not reach its final phase if follow-up analysis indicates further expansion is undesirable. The timing of development is contingent upon the availability of funds and the establishment of biennial statewide priorities.

This master plan study has been developed in depth, and correlates closely with public input received at two separate public meetings and in subsequent written responses. The plan also reflects the officially adopted principles governing the establishment, extension, and development of the State Park System. Any decisions which affect the welfare of South Mountains State Park must reflect the spirit of these principles.

TABLE OF CONTENTS

FOREWORD ii
INTRODUCTION 1
CULTURAL RESOURCES
- Location, Access, and Population 3
- History 4
- Regional Land Uses 6
- Existing Park Uses 8
- Recreation in the Region 12

NATURAL RESOURCES
- Physiography 15
- Geology — Hydrology 15
- Climate 17
- Soils and Slopes 17
- Vegetation 19
- Fauna 22
- Development Limitations 23

THE MASTER PLAN
- Summary 25
- Development Plan 26
  - Wilderness Use 26
  - High Shoals Falls 28
  - Bear Oak Area 30
  - Picnic Area 30
  - Campground 32
  - Horse Trailhead 32
  - Lake Complex 32
  - Park Office/Maintenance Center 34
  - Access 34
  - Interim Plan 38
  - Acquisitions Plan 40
  - Park Management Considerations 42
    - Services to Park Users 42
    - User Conflicts 42
    - Environmental Considerations 43
    - Interpretation 45
    - Archaeology 45
  - Development Phasing 46
  - Park Utilities 48

APPENDIX
- Typical Tent & Trailer Campsite 51
- Typical Family Primitive Campsites 52
- Typical Group & Horse Primitive Campsites 53
- Stairway & Boardwalk Details 54
- Bathhouse 55
- Boathouse 56
- Picnic Shelter 57
- Toilet Building 58
- Residence 59
- Office/Maintenance 60

BIBLIOGRAPHY 61

INTRODUCTION

". . . Here's an area we've got to save — while there's still time. . ." Director Thomas C. Ellis of N. C. Division of State Parks was referring to the beautiful High Shoals Falls on Jacob's Fork Creek in the South Mountains. The Falls was identified in a 1974 State Park's report proposing a new park area in the South Mountain range between Shelby and Morganton.

This area was first recommended as a state park in a study prepared by the National Park Service in 1940, and again in 1961. However, acquisition money was not appropriated by the General Assembly, and the proposal was shelved.

Another extensive reconnaissance in 1970 recommended, for a third time, a South Mountains State Park. The park was to be located in the Brier Creek watershed, with High Shoals Falls included as a satellite park. Brier Creek was considered to be the most ideal area in the entire South Mountains area for a full-fledged state park. The valley is ideal for development of typical state park facilities, and is surrounded on three sides by a continuous "wall" of mountains which form a huge "bowl" in excess of 5,000 acres.

A storm of public protest, however, arose against the Brier Creek proposal. Virtually everyone supported the concept of a state park somewhere in the South Mountains, particularly if it included High Shoals Falls. But, local landowners opposed state acquisition of the several small farms in the Brier Creek Valley that would necessarily be included in plans for development of the park. As a result, action by the state was postponed.

Meanwhile, the General Assembly allocated $12.5 million to the Division of State Parks for land acquisition, $1.5 million of which was allocated for establishment of South Mountains State Park. In 1974, two large tracts of land were offered to the State for purchase. One included High Shoals Falls.

In separate agreements, the State of North Carolina purchased 5,779 acres from Liberty Insurance and Diversified Mortgage Investors in December 1974, establishing the Park.

Subsequently, the Division of State Parks was committed to develop a comprehensive, long-range master plan.

Two public meetings were conducted by the planning team during the planning process. The first was held at Mt. Gilead Baptist Church, February 14, 1978, and the second at Western Piedmont Community College, April 11, 1978. The purpose of the meetings was to involve interested citizens in the planning process.

The Park's future was the main topic of a two-hour discussion during the first meeting, which was attended by over a hundred and fifty persons. The primary concern involved the development of an all-weather access road to the Park. All agreed the existing road is unacceptable for public access.

Most individuals wanted the primitive character of the Park preserved with intensive development restricted to the valley east of the park office. A safe overlook at High Shoals Falls, new hiking and horseback riding trails, and an enlarged picnic and camping area were suggested additions to the recreational program.

Trout fishermen requested segments of Jacob's Fork Nettle Branch, and Shinny Creeks be zoned for trout fishing only. They felt swimming and any other water related activities which might be provided in the park should be located on the lower elevations of Jacob's Fork. A number of persons at the meeting supported the idea of constructing a small lake on Jacob's Fork to accommodate these activities.

Two development alternatives were presented to 65 people at the second meeting. The wilderness alternative preserving over 90 percent of the Park was almost unanimously supported. The other alternative proposing an interpretive center, cabin colony, and swimming and boating impoundment on Jacob's Fork was soundly rejected.

A disparity between the two meetings, regarding the lake proposal, later prompted the planners to solicit additional public input to clarify public desires. Consequently, a citizen's petition and letter writing campaign was initiated in support of a feasibility study for a lake. A number of other written comments about various aspects of the alternative plans were also received.

Based on this substantial public input, as well as the comprehensive resource analysis that took place in the early stages of the planning process, a draft master plan was created. After official State approval, a summary of the draft was released to the news media for final public review.

The master plan was then finalized and published for distribution to interested citizens and organizations. A detailed description of proposals for South Mountains State Park is included in the master plan section of this document.

CULTURAL RESOURCES

LOCATION, ACCESS AND POPULATION

South Mountains State Park is located in Southern Burke County, on the border of Cleveland County. Interstate 40 to the north and Interstate 85 to the south of the Park provides access from the major population centers of North Carolina. Secondary arteries from the Interstate offer direct access to South Mountains.

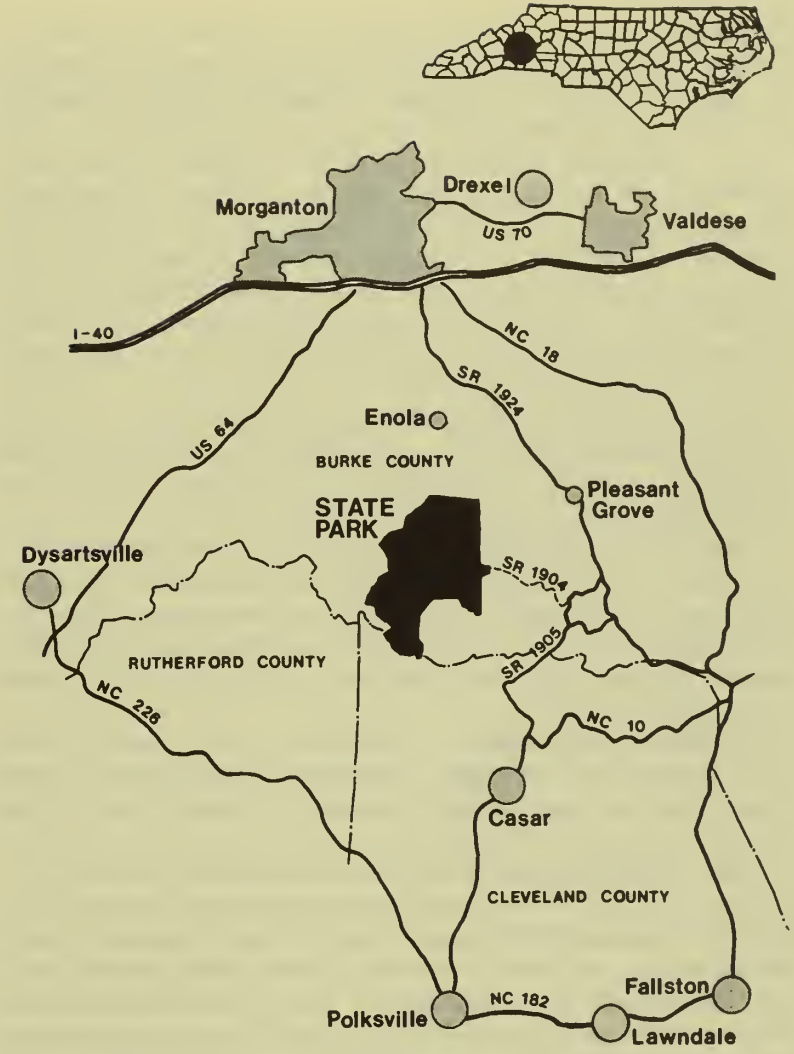
Morganton, Hickory, Statesville, and Asheville are within 50 miles of the Park and are all located along Interstate 40. U.S. 64, and N.C. 10, 18, and 226 intersect I-40 and continue south toward the Park. Winston-Salem, Greensboro, Durham and Raleigh are outside of the 50-mile radius, however, all are located along I-40.

Shelby, Gastonia, Charlotte, and Spartanburg, South Carolina are 50 miles or less from the Park, and are located along I-85. N.C. 226 and 10 connect I-40 and I-85, and N.C. 27 and 274 intersect I-85 and continue north toward the Park.

N.C. 18 and 10 are within 10 miles of the Park and provide easy access. A combination of routes can be taken to the park access road (S.R. 1904) from either road. S.R. 1913, S.R. 1924, and S.R. 1901 taken in sequence from N.C. 18, and S.R. 1545, S.R. 1547, and S.R. 1905 from N.C. 10 north of Casar are the best routes to the Park.

Approximately 950,000 North Carolinians live within a 50 mile radius of South Mountains State Park. By 1980, the population of this area is expected to surpass one million persons. The population growth rate is currently projected at about 1.6% annually for the 19 county area within the 50 mile radius. An additional 324,000 persons live in the three county area in South Carolina within 50 miles of the Park.

The 50 mile radius represents the bulk of the service area of the Park, although a significant number of visitors are expected to originate from areas further away. Most of the latter will be urban dwellers. Conversely, most local visitors will be rural or semi-rural. Only 42 percent of the population within the 50 mile radius are urban, with most of those living near the fringe.



LOCATION

HISTORY

The South Mountains Range is oriented 60 degrees north of east and includes parts of Burke, Cleveland, and Rutherford Counties. The area encompasses some 100,000 acres.

The mountains are thought to have served as a buffer zone separating the Cherokee and Catawba Indians. Prehistoric hunting and gathering groups probably established temporary camps on the summits of upland divides near streams, and main ridges above large valleys. However, the permanent agricultural villages were along the Catawba and First Broad Rivers. Very little archaeological information is available, and no habitation sites have been identified in the Park.

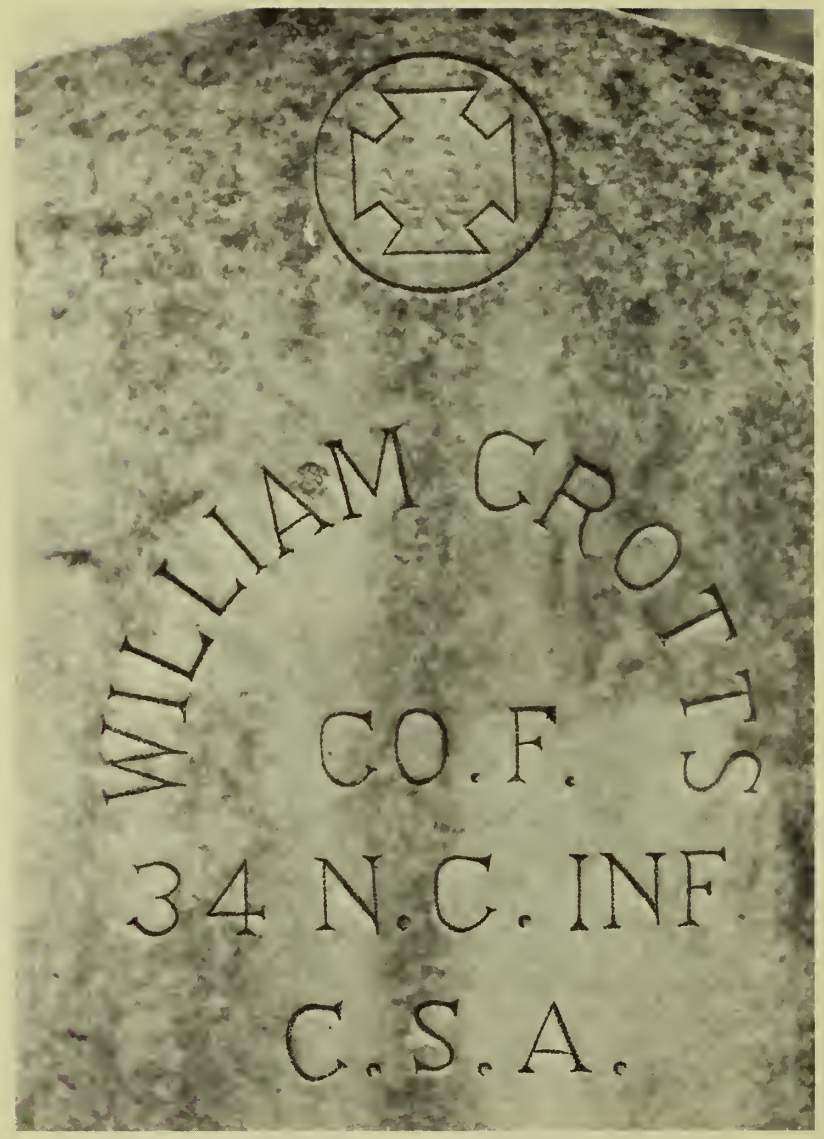
The first English, Welch, Scotch-Irish, and German settlers chose the fertile bottomland along the Catawba River. By the late 1700's the population of the Burke County area was 2,100 with a few settlers on the fringe of the South Mountains.

The Dave Bibby family constructed a cornmill and home on the plateau above High Shoal Falls during this period. The mill was located at the top of the Falls, and the homesite was approximately 250 yards west on Jacob's Fork. The foundation and chimney of the home remains, however, the mill has deteriorated completely over the years.

A second homesite was established by the Johnny Smith family at the present location of the park residence below High Shoals Falls. He and his wife's grave are located next to the residence, however, nothing remains of the original house.

The 1828 gold rush at Brindleton prompted a tremendous population influx in the area. According to local history, Sam Martin discovered gold flakes and grains in the mud used to seal Bob Anderson's log cabin. Martin borrowed a dishpan from Anderson's wife and panned more gold from a nearby stream. Anderson and Martin became partners, and within a year had mined $40,000 worth of gold.

Prospecting and mining spread rapidly, mostly in the Brindleton and Silver Creek areas. According to early reports, more



than one million dollars worth of gold were found. Many new people and wealthy slave holders were lured by the gold rush. By 1833, over 5,000 slaves were mining in addition to the thousands of individual prospectors. Brindleton, Brackettown, Huntsville, and Jamestown were several mining towns that developed overnight.

The bigger mining companies began moving out by 1834, although new immigrants and local residents continued to mine. Only 100 Burke County residents listed 'miner' as an occupation by 1850, and no company or individual was producing annual yields of gold in excess of $500 by 1860.

The South Mountains area was settled by a few pioneers and immigrants from the gold rush. The soil was light and rich in humus in the broad valleys, and could be worked with flimsy tools and plows. New ground was cleared and fenced for planting and livestock.

Tobacco and corn were the primary agricultural crops, and hog farming was very popular. Most small farmers were very independent and depended little on the rest of the county for commodities. Therefore, the South Mountain area changed very little from the late 1800's to the early 1900's.

The first major opening of the park area came in the 1930's when Camp Dryer, a Civilian Conservation Corps camp, (C.C.C.) was established at Enola. Camp Dryer housed over 200 unemployed youths aged 18 to 25. They cleaned stream beds, constructed forest service roads, and built a forest observation tower on Horse Ridge in the Park. The Lower and Upper CCC roads running through the Park are still maintained for fire protection.

Most of the undeveloped mountain land was owned by timber companies, primarily Wright-Bachman (16,480 acres) and Hutton and Bourbonnais (9,900 acres). Historically, these companies removed most of the merchantable timber from the mountains, leaving the second and third growth forests that characterize the area today. In addition, the Town of Morganton, Broughton State Hospital and the State School for the Deaf acquired land (4,500 acres, 3,000 acres, and 513 acres respectively) for water supply on the Henry Creek watershed in the South Mountains. Together these landowners formed the South Mountains Association to coordinate a fire protection program with the State Forestry Office.

A Recreation Study completed in April, 1941, by the N. C. Department of Conservation and Development indicated a need for a State Park in the Burke-Alexander-Caldwell County region, and a National Park Service Study conducted in coordination with the State recommended a site in the South Mountains on Henry Creek. A four-year park feasibility study resulted in an acquisition proposal to the 1945 General Assembly which was defeated, temporarily ending hope for a South Mountain State Park.

Through leasing agreements with private landowners, the North Carolina Wildlife Resources Commission (W.R.C.) established the 11,560-acre South Mountains Wildlife Management Area in the early 1950's. They managed game populations for hunting and fishing. Trout streams were monitored and stocked, and wildlife fields for deer and wild turkeys were maintained during 20 years of management. However, most of the programs were dropped in the late 1960's. A checking station and residence has been constructed at the old Johnny Smith homesite to monitor hunting activities, and with the cooperation of the N. C. Forest Service, the old CCC roads were maintained and the old Horse Ridge fire tower was replaced with a new one at Benn Knob.

Ownership gradually changed in the Mountains. Champion International Company acquired much of the Hutton and Bourbonnais property and currently leases 4,690 acres to the W.R.C. for a State Game land. Liberty Life Insurance company purchased 9,355 acres and leased part of it for second-home recreational development, Pine Mountain Lakes. The N. C. Division of State Parks eventually acquired 5,779 acres of Liberty Life's property establishing South Mountains State Park.

REGIONAL LAND USES

South Mountains State Park is surrounded by a variety of land uses: a vacation-home community, a protected watershed, and timber land. One of the largest single owners adjoining the Park is Champion International Company, whose lands border approximately four miles of park land to the north and east. Champion currently leases part of its land to the Wildlife Commission as a State Game Land. The unmaintained section of S.R. 1904, the park access road, crosses Champion land, and a poorly-maintained camping area used by hunters and local residents is located along the road.

In early 1978, Champion completed harvesting timber on a small section of land bordering the Park along the Upper CCC Road. Although the clear-cut area can be easily seen from the road, projected reforestation is expected to eliminate the existing visual impact. In the future, Champion would like Short and Upper CCC Roads to remain open in order to continue timber harvests. Short Road connects the Upper CCC Road and the South Mountains Park Road (Headquarters Road), which permits illegal park entry by hunters and other visitors with four-wheel drive vehicles.

The southeastern park boundary adjoins the Liberty Life property leased to Pine Mountain Estates. Approximately 2,600 acres are being developed, including an 18-hole golf course, a lodge and office, 20 homes and several miles of roads. In addition, a water supply impoundment for the subdivision is proposed on 800 acres of Jacob's Fork watershed, above High Shoals Falls.

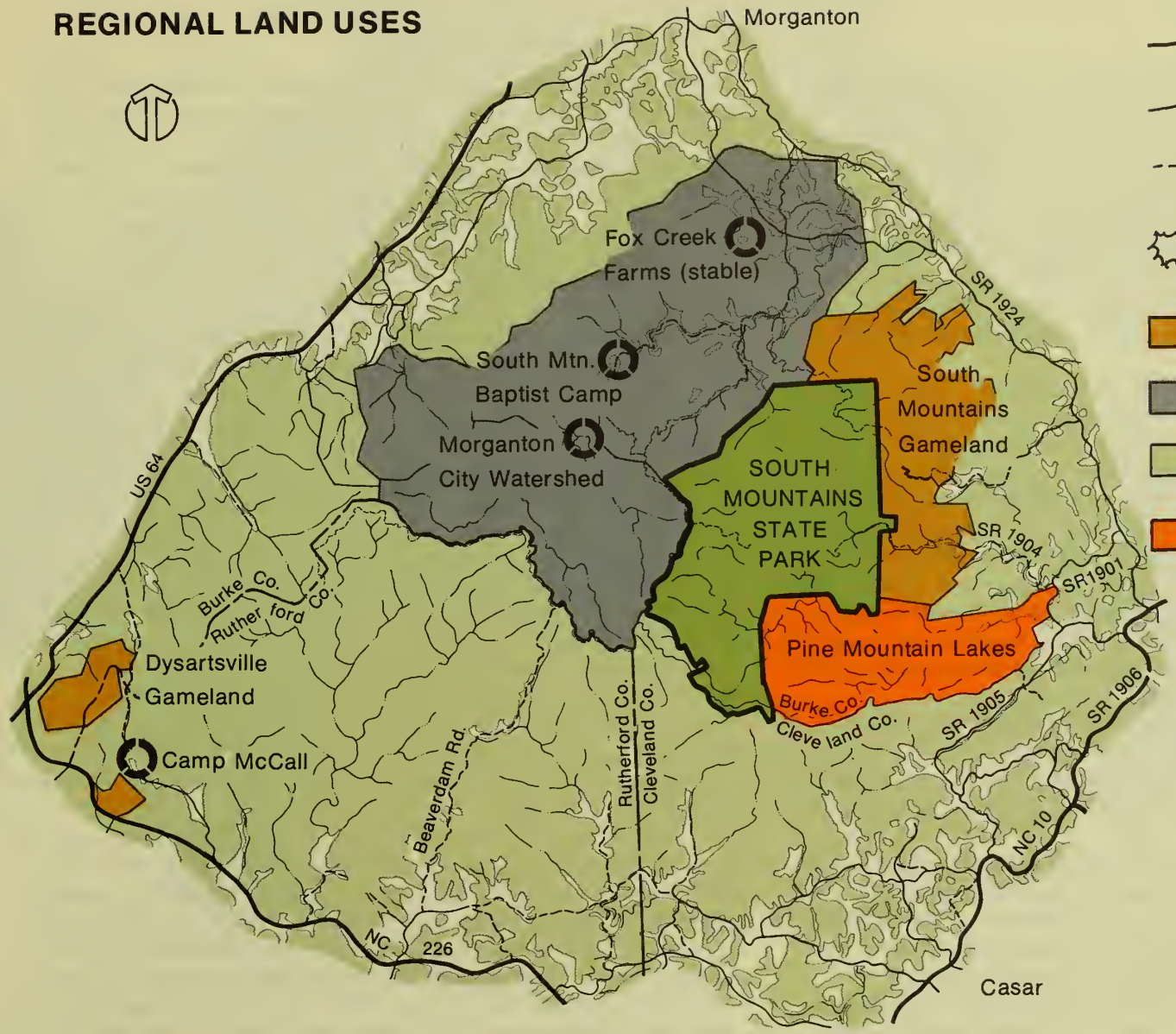
The Joe Rollins Company, a second timber company, owns property along the southwestern park boundary. Most of the company's land is south of the park in the Brier Creek Watershed; and, they have not cleared any land in the vicinity of the Park since it was established.

The W.R.C. owns approximately 92 acres of land at the southwestern corner of the Park, between the Upper CCC Road and the Park. A privately-owned 130-acre parcel adjoins the Wildlife property. Both parcels are heavily hunted during the season by local residents despite being very small and adjacent to the Park. The area is remote and difficult to patrol, and has become a serious management problem for park personnel.

The Town of Morganton maintains and regulates its watershed on the western park boundary. Because it supplies the towns drinking water, it is strictly managed and regularly patrolled. No other uses are permitted within its boundaries except some timber management, making it a desirable park buffer.

The remaining land on the northwestern boundary is divided into small private ownerships. Timber cutting has occurred randomly and is likely to continue. A few cabins and homes have been constructed at lower elevations in the valley. Most of these uses cannot be seen from the park boundary.

REGIONAL LAND USES



LEGEND

- HARD-SURFACED ROADS*
- GRAVEL ROADS*
- DIRT ROADS
- CLEARED LAND (agricultural or rural development)
- STATE GAMELAND
- A-1 WATERSHEDS
- FOREST LAND
- SECOND HOME DEVELOPMENT

* state maintained roads

EXISTING PARK USES

The poor condition of the park access road, S.R. 1904, is the primary reason visitation has been limited to a few well-equipped visitors. The 1.9 mile road section from the Jacob's Fork Ford to the park boundary is frequently impassible for passenger vehicles. Only four-wheel drive vehicles are able to consistently travel this road in all weather. The remaining section of dirt road from S.R. 1905 to the ford is a land-and-half wide with 3 single-lane bridges crossing Jacob's Fork and is maintained by the N. C. Department of Transportation. Heavy rains often wash out sections of road adjacent to the stream, requiring periodic filling and regrading.

The ford is also washed out by a rain-swollen Jacob's Fork, and usually needs regrading at least once or twice a year. This problem is most acute during the spring and summer when park visitation is the highest. Even four-wheel vehicles have difficulty crossing the Jacob's Fork when the ford is deep and the gravel on the creek-bed has been swept away.

The old W.R.C. checking station and residence are located 800 feet inside the park boundary on Headquarter's Road. The residence is used by the park ranger and the checking station was converted into a temporary office and maintenance building. Vehicles are not permitted past the residence, and must park in the field across from the house.

The field has not been graded for a parking lot, and parking spaces have not been marked. Visitation has not been heavy enough to cause problems. Johnny and Maureen Smith's graves are at the far end of the field and are being protected and maintained by the park staff.

As mentioned earlier, Short Road connects the Upper CCC road and Headquarters Road, and terminates at the park residence. Hunters from the Champion International Game Land and other people with four-wheel drive vehicles illegally enter the park here. As a result, hunting has occurred in the park.

A six-table picnic area is located 0.4 mile from the residence on Headquarters Road. This is a temporary location with no water or sanitary facilities. The High Shoals Road, an old logging road, passes through the picnic area and terminates approximately 3.2 miles further at the Lower CCC Road. A short spur road, .4 miles from the picnic area long High Shoals Road, follows the ridge to the top of High Shoals Falls. The hike from the park office totals 1.4 miles. A shorter and more rugged route follows Jacob's Fork to High Shoals Falls, and is one mile from the parking area. This trail has 40-60 percent slopes which require hikers to have agility, strength, and balance. Hikers scrambling up and down these steep slopes have disturbed the fragile herbaceous vegetation established on the shallow soils and exposed boulders; however, they must climb the slopes to view the Falls.

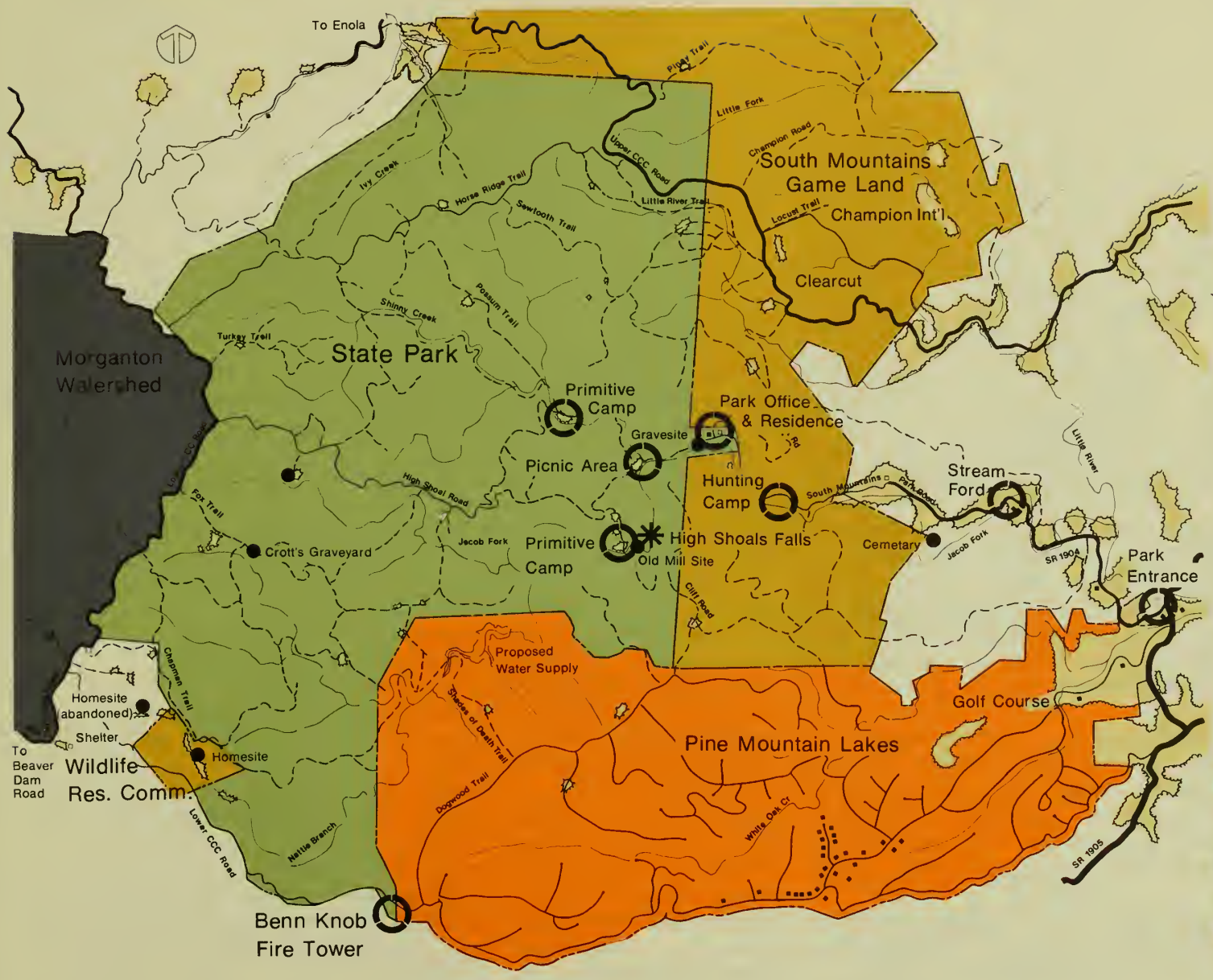
A primitive camp is located in the old field approximately 1,-300 feet west of the Falls. Visitors are permitted to camp anywhere in the field; no water or sanitary facilities are available, and campers are responsible for transporting their own trash out the park.

Another primitive camp is provided on Shinny Creek on the New High Shoals Road. This site is an old W.R.C. pasture planting, and is approximately one mile from the parking area. It is operated the same as the High Shoals camp.

Numerous one-lane dirt roads were built in the South Mountains by the CCC program and the timber companies. They have been and are used for hiking, horseback riding, and outdoor recreational vehicle (ORV) trails. New park trails have not been developed, but the old roads have been adapted for hikers and horseback riders use.

The Upper and Lower CCC Roads, built in the 1930's, provide access to remote areas in the South Mountains. The Upper CCC Road connects the Little River and Henry Creek by crossing Simm's Hill, Bob's Knob, and the State Park. It is used by the Champion Corporation for access for timber operations, by hunters for Game Land access, and by ORV enthusiasts for a trail. The road is not gated, so the northern section of the park is accessible to anyone with a four-wheel drive vehicle. The section of

EXISTING PARK USES



LEGEND

- PAVED ROADS
- GRAVEL ROADS (improved and unimproved)
- UNIMPROVED LOGGING ROADS (good condition)
- UNIMPROVED LOGGING ROADS (poor condition)
- STREAMS
- ACTIVITY AREA
- RESIDENTIAL UNITS
- UNINHABITED BUILDINGS
- HISTORIC SITE
- FIELDS
- COMMERCIAL DEVELOPMENT
- PARK PROPERTY
- GAME LAND
- MORGANTON WATERSHED

road in the park is steep-sloped, one-laned and, dangerous in snowy and icy winter weather.

The Lower CCC Road closely parallels the western and southwestern park boundary, and forms the eastern boundary for the Morganton watershed, connecting Henry and Beaver Creeks via the Rich Mountain CCC Road. Together, these two roads provide the only north-south access road through South Mountains; therefore, neither road can be gated or controlled as long as the mountains are privately owned by individuals and companies.

High Shoals Road and Horse Ridge Trail are the main roads bisecting the park. High Shoals Road connects Headquarters and the Lower CCC Roads, and Horse Ridge Trail connects the Upper and Lower CCC Roads. Both single-lane dirt roads are gated and closed to vehicles.

Many dead-end trails emanate from the old roads penetrating the Park. Most of these are old, abandoned logging roads. Although many are still passable, others are overgrown with bushes and young tree saplings. The CCC roads are periodically graded by the N. C. Forest Service, while the ungraded roads have serious erosion problems caused by years of hunting and ORV traffic.

In addition to High Shoals Falls, the Park has other noteworthy scenic attractions which draw sightseers into the area. Two are rock outcrops on cascading creeks. The first one is located on Shinny Creek within view of High Shoals Road. The second is located off Short Road on the Little River. It is named Little High Shoals Falls, and is privately owned. Another scenic attraction is the beautiful South Mountains panorama which can be viewed from Benn's Knob fire tower. The view is inspiring and well worth the climb to the top. However, the tower should be inspected before public access is permitted.

The W. R. C. is conducting two habitat studies in the State Park and the Champion Game Land. The first one is a migration study of wild turkey, and the other is an evaluation study of trout streams.

Twenty wild turkeys with electronic monitoring devices have been relocated in the area. Biologists are mapping migration patterns, and studying mortality and productivity over a three-year period. The turkey population has decreased over the past years, and the study is part of a program to increase population numbers and provide better habitats.

Trout fishing is an important mountain activity and long-time tradition. All park streams are designated as "Public Mountain Trout Waters" by the W.R.C. Jacob's Fork and its tributaries were fished long before they were included in the State Park. The three-year trout stream evaluation study will provide data for future stream classification. It will define population levels, evaluate the habitat quality, and recommend continuing management practices.

LITTLE RIV. TR.

RECREATION IN THE REGION

Multi-County Planning Regions C, E, and F are within the 50-mile radius of South Mountains State Park. Approximately 94,000 acres of local, State, and Federal recreation facilities exist in this area, and 171,000 acres of North Carolina Game Lands. However, most of these facilities are on the edge of the region, at least 25 miles away from South Mountains.

The Blue Ridge Parkway and Pisgah National Forest are approximately 40 miles west by road. The Parkway has 16.5 million annual visitors, and is of nation-wide significance. The National Forest Service has several recreation-oriented forest units supplementing the facilities on the Parkway. Mount Mitchell State Park is also on the Parkway north of Asheville.

Lake James, Rhodiss, and Hickory are approximately 20-30 miles north along the I-40 corridor. Camping, fishing, and power boating are the main recreational activities. They serve the local towns of Marion, Morganton, Lenoir, and Hickory.

Lake Norman, a Duke Power Company impoundment, is 40-50 miles east of the Park near I-77. Public facilities include camping grounds, boat launches, and marinas. Power boating, fishing, and sailing are the dominant lake uses. Duke Power State Recreation Area is located on the northern tip of Lake Norman and has camping, picnicking, boating, and swimming facilities on 1,-429 acres. Proposed facilities include cabins, a nature interpretation center and horseback riding trails, with approximately 1,000 acres of additional land proposed. Annual use is expected to more than triple the present rate of 103,000 upon completion of all proposed facilities.

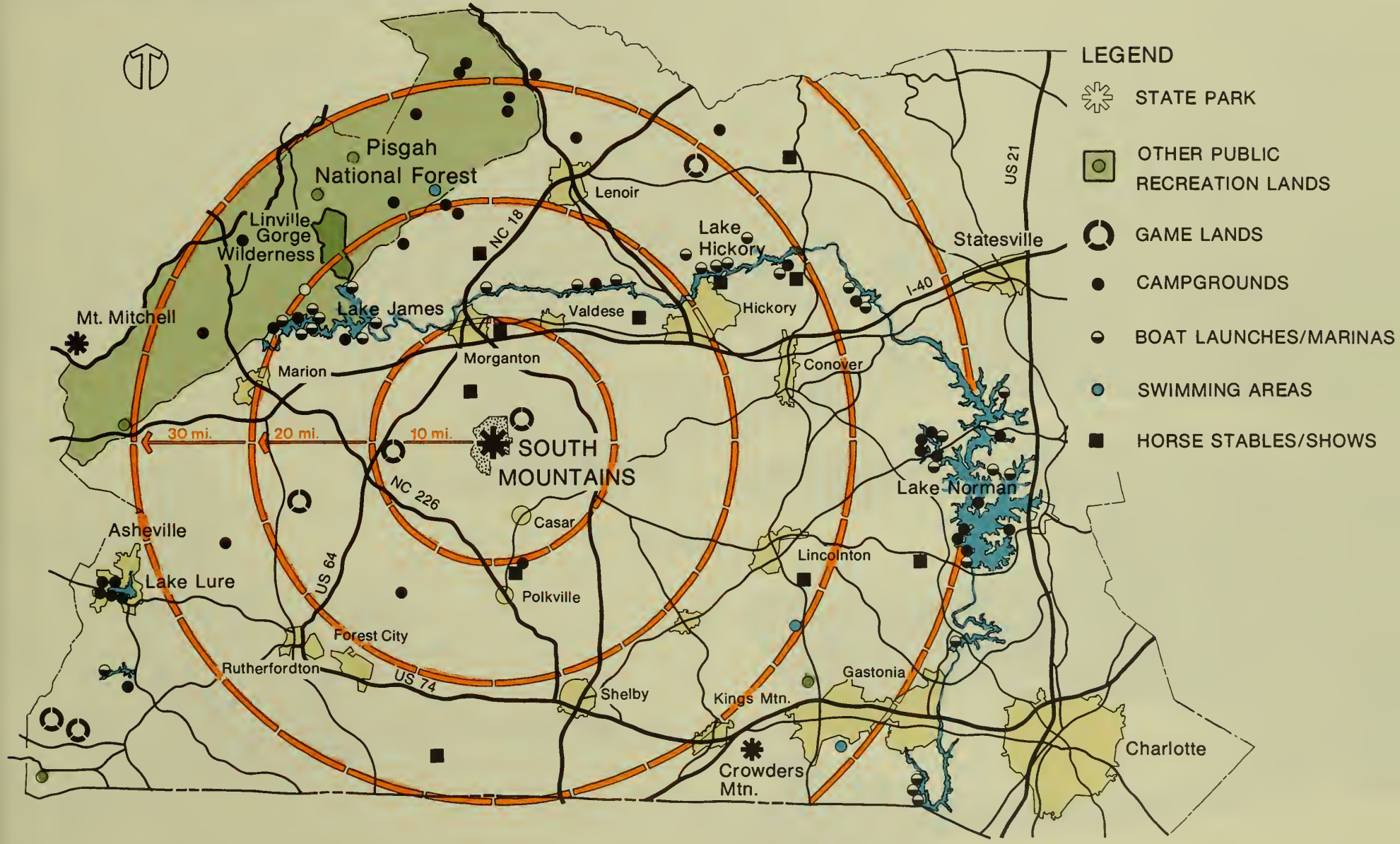
Crowders Mountain State Park in North Carolina and Kings Mountain National Military Park and State Park in South Carolina are 45 miles southeast of the Park on I-85. Crowders Mountain is a natural quartzite outcrop preserved by the N. C. Division of Parks and Recreation, and Kings Mountain is a Revolutionary War battlefield managed by the National Park Service with an adjacent South Carolina State Park. Camping, hiking, picnicking, and historic interpretation are provided in both of the South Carolina Parks. Crowders Mountain, a newly developing N. C. State Park, allows primitive camping, hiking, and picnicking. Boating and horseback riding are proposed at Crowders Mountain along with about 2,600 additional acres. Projected annual use is between 150,000 and 200,000 visitors upon completion of all proposed facilities.

In summary, 36 publicly and privately owned campgrounds with approximately 2,450 camp sites operate in the study region. Annual attendance is nearly 500,000; however, 16 camps are associated with the lake areas and 18 others are 25-40 miles away from the Park in the Pisgah Forest and along the Blue Ridge Parkway.

Six public swimming areas with annual attendance of 31,000 and 18 private boat landings and marinas operate on the reservoir projects; 11 W. R. C. public boat launches are located in the region. The marinas attract 22,000 annual visitors, and the boat launches approximately 344,000.

It is significant, however, that few of these water-based resources are suitable for row-boating, canoeing, or cold-water fishing. Furthermore, available lake swimming beaches fall far short of meeting existing demand for such facilities.

REGIONAL RECREATION RESOURCES



NATURAL RESOURCES

PHYSIOGRAPHY

South Mountains State Park lies within the South Mountains Range, a region encompassing some 100,000 acres in Burke, Cleveland and Rutherford Counties. Isolated from the more prominent Blue Ridge Range to the Northwest, the South Mountains Range rises from the Piedmont Plateau to an altitude slightly greater than 3000 feet.

The park area itself is characterized by relatively steep terrain with narrow ridge tops and valleys. Slopes frequently exceed 60% with very little flat terrain. Elevations range from 2894 feet on Benn's Knob to less than 1250 feet along Jacob's Fork, downstream from the present park boundary.

GEOLOGY — HYDROLOGY

The basic material comprising the South Mountains is sillimanite — mica schist. Layers of quartzite are common to this rock type with small lenticular zones of dark green where garnet, ferous, and amphibolite gneiss and schist may be found. However, the only known mineral resource of any commercial value is a single granitic intrusion known as Horse Ridge, and perhaps some gravel deposits along major streams.

A number of other significant geologic features are located within or near the park. The most important is probably High Shoals Falls the main attraction within the park. With a sheer drop of almost 80 feet and extensive series of cascades below, High Shoals Falls is a spectacular natural feature. Other significant falls or cascades occur in two locations along Shinny Creek within the park, two locations along the Little River just outside the park boundary (including Little High Shoals Falls), as well as, the upper reaches of Brier Creek southwest of the park.

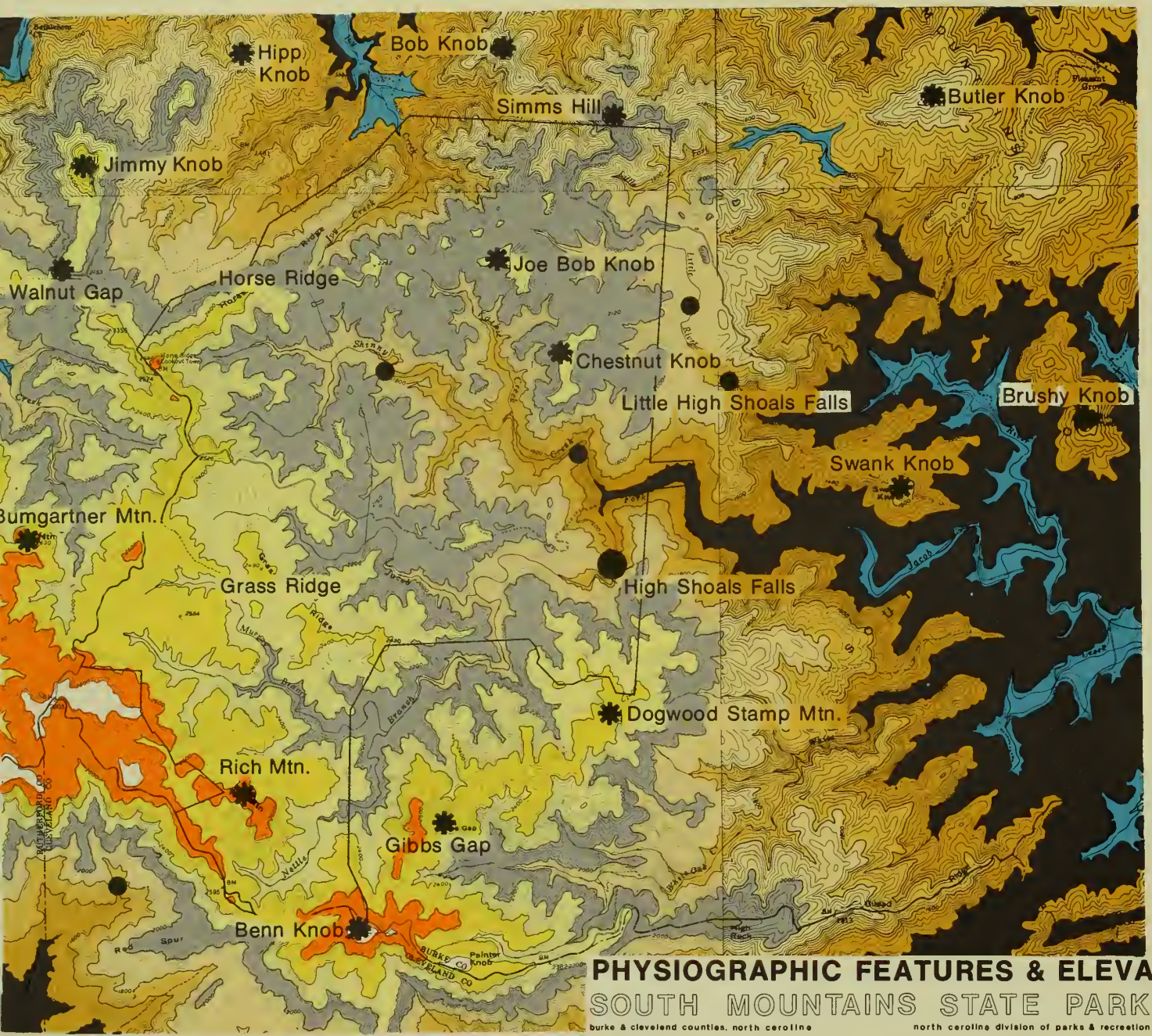
Southeast of High Shoals Falls is a massive rock cliff overlooking the Jacob's Fork ravine. Two smaller rock outcroppings occur on the south and northwest sides of Chestnut Knob. However, at least eight exposed rock faces are located near the top of the extensive escarpment overlooking Brier and Ward Creeks, just south of the park boundary.

Groundwater in the park area generally contains significant quantities of calcium bicarbonate, along with magnesium and sodium. Classified as soft water, it is suited for most domestic purposes.

According to the Division of Environmental Management, wells developed in wide flat areas at lower elevations near creeks can be expected to yield between 15 and 30 gallons per minute minimum. At higher elevations, flat areas in topographic saddles and near creeks should yield 10 to 15 gpm. However, shallow wells with hand pumps would be sufficient for hiking and primitive camping, yielding up to 5 gpm. Ridges and mountain tops will likely not be suitable for producing wells.

The entire South Mountains State Park area drains into the Catawba River watershed. Jacob's Fork and its upper tributaries, along with the Little River and Ivy Creek, comprise the surface waters of the park. All are characterized by boulder strewn stream beds with numerous cascades and relatively steep gradients. Surface water is of the highest quality in terms of the lack of polluting agents and bacteriological organisms. With the exception of Ivy Creek, all the park streams are classified "A-II Tr." As such, they are suitable as a source of water supply for drinking, culinary, or food processing after approved treatment . . . and any other usage requiring waters of lower quality. Furthermore, these streams are also considered suitable for the propagation of natural trout or for the maintenance of trout when stocked.

Ivy Creek, on the other hand, is classified "C Tr." It is therefore considered suitable for fish and wildlife propagation, as well as for boating, wading, and other uses requiring waters of lower quality. Likewise, it is suitable for the propagation and/or maintenance of trout populations.



LEGEND

- FLOODPLAIN
- UNDER 1400'
- 1400'-1600'
- 1600'-1800'
- 1800'-2000'
- 2000'-2200'
- 2200'-2400'
- 2400'-2600'
- 2600'-2800'
- OVER 2800'
- WATERFALLS
- PEAKS & GAPS

PHYSIOGRAPHIC FEATURES & ELEVATIONS

SOUTH MOUNTAINS STATE PARK

burke & cleveland counties, north carolina

north carolina division of parks & recreation

0 800 1600 3200 feet

0 250 500 1000 meters

CLIMATE

The climate of the South Mountains area is relatively moderate, being significantly modified by the sheltering effect of the main ridge of the Appalachians. In fact, the coldest weather is only a few degrees less than that of lower lying areas to the east. The mean annual temperature is about 59°F, with extreme temperatures ranging from a high of 106°F to a low of −4°F. The average number of freeze-free days in the South Mountains area is 192 days annually, from April 14 to October 23.

Precipitation is abundant, and generally well distributed throughout the year. The average annual rainfall is approximately 49.6 inches. July and August are the wettest months with over 5 inches of average monthly precipitation, usually in the form of thunderstorms. October and November are generally the driest months with about 3 inches of rain each. Snow falls virtually every winter, but rarely accumulates more than a couple of inches.

Prevailing winds in the South Mountains are from the southwest in spring and summer and from the north and northeast in the fall and winter. The average speed of the wind at the earth's surface is about eight miles per hour.

The sun shines more than half the daylight hours in the area, with the greatest amount of sunshine occurring in late spring and early summer. Relative humidity averages about 70 percent annually, with the highest humidities occurring in the late summer and the lowest in spring.

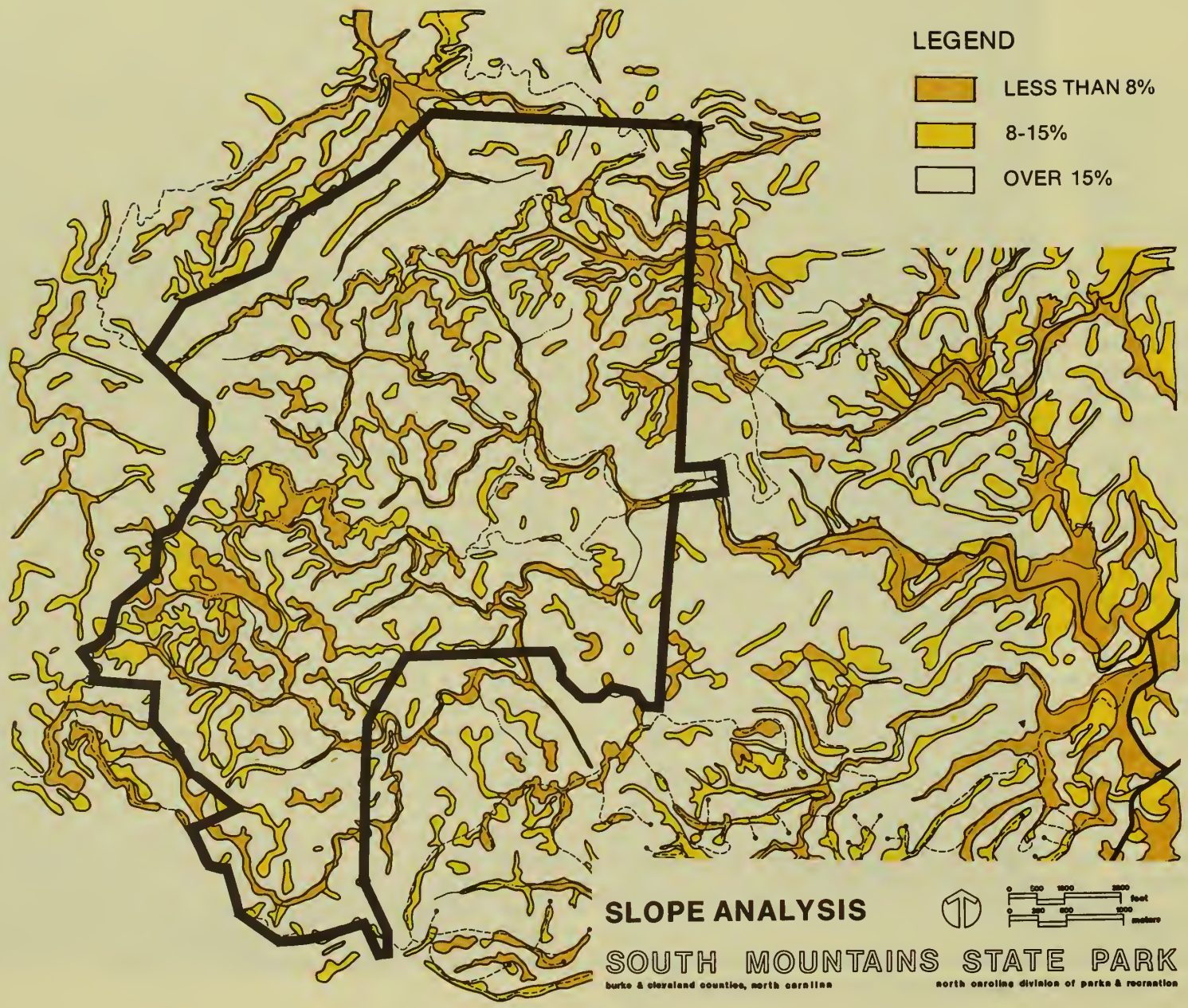
SOILS AND SLOPES

The soils of the park study area are classified within the Chester — Ashe — Hayesville Association. These soils are generally well drained, sometimes excessively. They can be shallow to moderately deep upland soils with friable, fine sandy loam to clay subsoils on narrow ridges and moderate to steep side slopes. In general, the soils of this association have predominately severe limitations due to the steepness of the slopes as well as a shallow depth to bedrock. In addition, some soils in this association are characterized by low bearing strength, surface stones, and frost action problems.

It must be realized however, that the soils data for the South Mountains area are not really adequate for master planning or site planning purposes. A general county soils map and an antiquated 1926 soils survey are available, but a modern, detailed soil survey would be much more desirable. Efforts should be made to complete such a survey as soon as possible.

Over 85 percent of the existing South Mountains State Park, as well as surrounding lands, consists of very steep terrain with slopes over 15 percent. Slopes in excess of 60 percent are frequent. More gradual slopes, comprised mostly of rolling terrain, exist on several ridge tops on the southwest fringe of the Park. However, access is rather difficult. Other ridges in the area have somewhat gentle slopes of 10 to 15 percent, but are extremely narrow.

Many of the stream valleys have relatively gentle grades under 10 percent, but virtually all are very narrow. Rolling terrain under 15 percent occurs along the upper reaches of Little River, but access is poor. The largest expanse of relatively flat land (under 5 percent slope) occurs along Jacob's Fork Creek, primarily downstream from the existing park boundary.


LEGEND
LESS THAN 8%
8-15%
OVER 15%
SLOPE ANALYSIS
SOUTH MOUNTAINS STATE PARK
burke & cleveland counties, north carolina
north carolina division of parks & recreation

VEGETATION

Seven basic forest communities were identified in the vicinity of South Mountains State Park: "Mixed Mesophytic", "Mixed Deciduous", "Mixed Deciduous-Pine", "River Flood Zone", "Rock Outcrops," and "Disturbed Areas." The "Mixed Deciduous-Pine" community is the most common. Included in these communities are four species which are classified in "Endangered and Threatened Plants and Animals of North Carolina." These four species are: witch alder (*Fothergilla major*), Carolina beech drops (*Monotropsis odorata*), bear oak (*Quercus ilicifolia*), and ginseng (*Panax quinquefolium*).

The "Mixed Mesophytic" communities are situated on sheltered sites, primarily north facing coves and mesic sheltered slopes along streams. Species composition is dominated by red maple (*Acer rubrum*), buckeye (*Aesculus octandra*), yellow birch (*Betula lutea*), beech (*Fagus grandifolia*, yellow poplar (*Liriodendron tulipifera*), basswood (*Tilia heterophylla*), and hemlock (*Tsuga canadensis*). Associated species include ashes (*Fraxinus americana and pennsylvanica*), American holly (*Ilex opaca*), umbrella tree (*Magnolia fraseri*), and red oak (*Quercus rubra*). Larger trees are found on the sites which are very steep and were probably inaccessible to previous logging operations. Undergrowth is relatively lush, and includes numerous herbs, ferns, and vines.

The "Mixed Deciduous" community occupies the less mesic slopes and middle to upper north-facing slopes above the sites occupied by the mixed mesophytic type. Dominant species include hickories (*Carya glabra and C. tomentosa*), black locust (*Robinia pseudo-acacia*), American elm (*Ulmus americana*), oaks (*Quercus alba, Q. rubra and Q. prinus*), red maple (*Acer rubrum*), and white pine (*Pinus strobus*). Associated species include yellow birch (*Betula lutea*), yellow poplar (*Liriodendron tulipifera*, black gum (*Nyssa sylvatica*), beech (*Fagus grandifolia*), scarlet oak (*quercus coccinea*), cucumber tree (*Magnolia acuminata*), and mulberry (*Morus rubra*).

Mountain laurel (*Kalmia latifolia*) and rhododendron (*Rhododendron maximum*) dominate the shrub layer in the more xeric mixed-deciduous community. However, deciduous shrubs are predominant on the more mesic sites. The herbaceous layer becomes more abundant along seepages and intermittent streams in this community. Particularly important is the occurrence of Carolina beech drops, and endangered species, on these sites.

The "Mixed Deciduous-Pine" communities are usually located in open, steep slopes or flat ridge tops with dry, rocky soils. The closed canopy of this vegetation type is primarily composed of a mixture of oaks and pines including rock chestnut oak (*Quercus prinus*), scarlet oak (*Quercus coccinea*), Virginia pine (*Pinus virginiana*), and pitch pine (*Pinus rigida*). Major associated species include black oak (*Quercus velutina*), black jack oak (*Quercus marilandica*), post oak (*Quercus stellata*), red maple (*Acer rubrum*), and Table Mountain pine (*Pinus pungens*). A preponderance of pine is probably due to the successional nature of previously timbered sites.

The shrub layer varies from a continuous heath layer on the drier sites to a more open shrub layer with higher species diversity on the more mesic sites. Conversely, the herbaceous layer is more diverse and its cover greater on the more mesic sites. The rare Carolina beech drops are also found scattered about this community in the herbaceous layer.

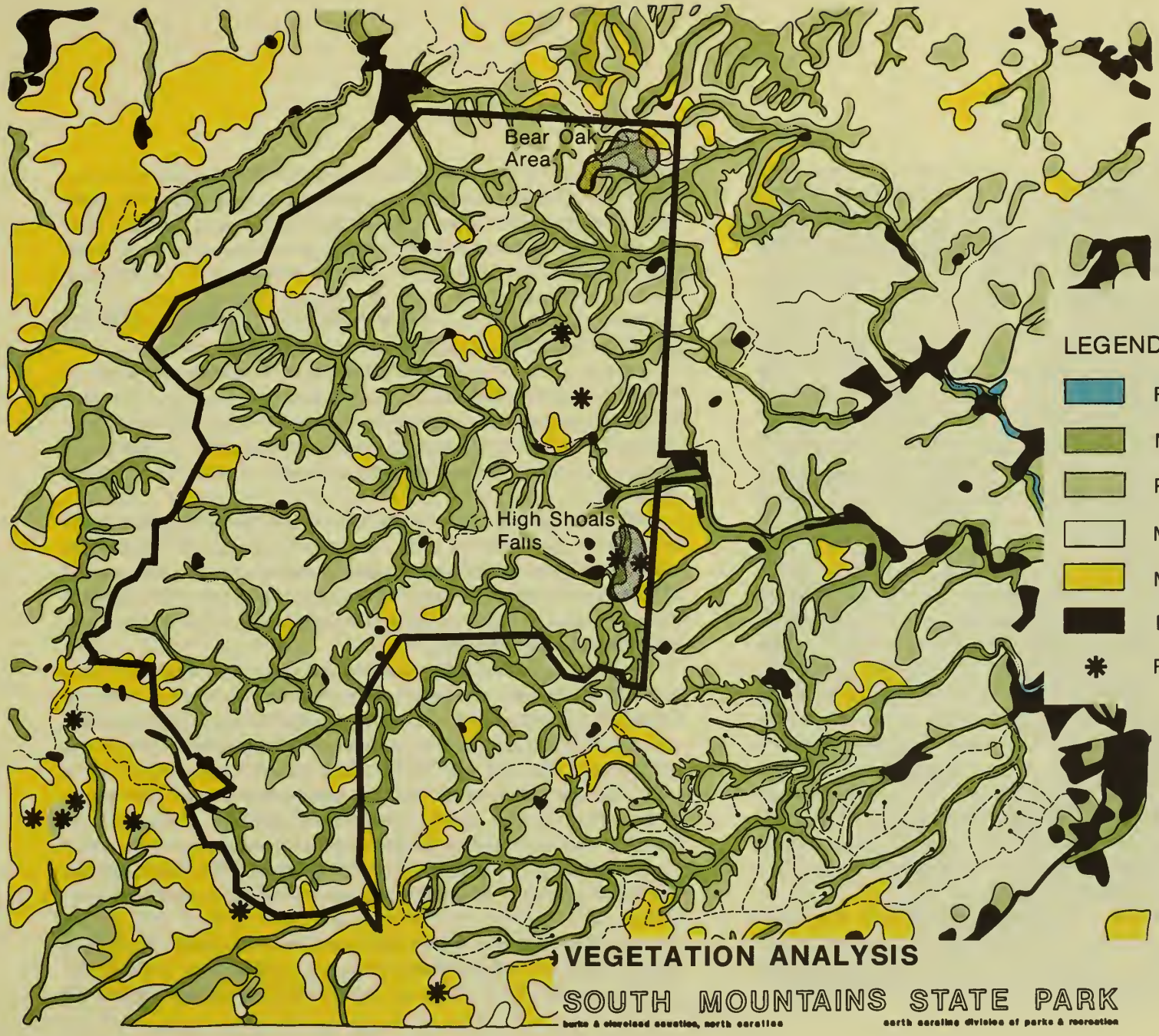
Self-maintaining "Pine" communites are frequently found on the highest peaks, sharpest ridges and leads, and over the most shallow soils. These pine dominated sites are maintained by topographic and edaphic conditions as well as by fire which has frequently swept across these sites. The open canopy is dominated by Virginia pine (*Pinus virginiana*), pitch pine (*Pinus rigida*), and Table Mountain pine (*Pinus pungens*) with a subcanopy of oaks. Rock chestnut oak (*Quercus prinus*), scarlet oak (*Q. coccinea*), blackjack oak (*Q. marilandica*), American chestnut (*Castanea dentata*), black gum (*Nyssa sylvatica*), sassafras (*Sassafras albidum*), and sourwood (*Oxydendrum arboreum*) occupy this stratum. However, on the most exposed and very rocky sites, the Table Mountain pine achieves a higher importance. Some of the latter type of sites are particularly significant due to the presence of bear oak (*Quercus ilicifolia*), and witch alder (*Fothergilla major*) in the understory.

Successional pine communities exist on disturbed sites such as abandoned fields and old homesites. These usually occur at lower elevations and on protected sites. Virginia pine (*Pinus virginiana*) usually dominates these sites and occurs in even-age stands. The shrub and herb coverage in these stands is usually low due to the thick growth of the pines themselves.

The River Flood zone community occurs on the narrow floodplains characteristic of the streams of the South Mountains area. These floodplains usually consist only of a narrow sand flat a few feet wide along rocky stream margins. Dominant species include river birch (*Betula nigra*), sweetgum (*Liquidambar styraciflua*), yellow poplar (*Liriodendron tulipifera*) and sycamore (*Platanus occidentalis*). Associated species include alder (*Alnus serrulata*), pawpaw (*Asiminia triloba*), devil's walkingstick (*Aralia spinosa*), ironwood (*Carpinus caroliniana*), witch-hazel (*Hamamelis virginiana*), Virginia willow (*Itea virginica*), and silky willow (*Salix sericea*).

When the streams are more narrow and the banks much steeper, rhododendron (*Rhododendron maximum*) dominates to the water's edge. Along less steep margins, alder (*Alnus serrulata*) frequently forms dense riverbank shrub thickets. Silky willows (*Salix sericea*) often occur on small sand deposits in the streams, along with a number of herbaceous species.

Large areas of rock outcroppings are not common in the South Mountains, although massive boulders are often present in stream beds and exposed on the steepest slopes. The largest is a rock cliff on the slope overlooking High Shoals Falls from the southeast. Various species of delicate and herbaceous plants occur on such outcrops. The herbaceous plants are prevalent on


Bear Oak Area
High Shoals Falls
LEGEND
RIVER FLOOD ZONE
MIXED MESOPHYTIC
PINE
MIXED DECIDUOUS-PINE
MIXED DECIDUOUS
DISTURBED
ROCK OUTCROP
VEGETATION ANALYSIS
SOUTH MOUNTAINS STATE PARK
burke & cleveland counties, north carolina
north carolina division of parks & recreation

shaded, moist boulders within the mixed mesophytic forest community, especially near the Falls within the spray zone.

Disturbed areas include such habitats as roadsides, seepages and wet ditches along roadsides, recently abandoned fields and the yard around the checking station. Artificially cleared and managed areas, such as the wildlife fields previously maintained by the W. R. C., are also considered under this category. Various grasses and vines occur in abundance along the trails and in the clearings. Many are introduced species. The fields in particular have a wide variety of species which grow on a seasonal basis, such as a large number of composites which add color to the fall. The woodland border between these fields and the surrounding forest is often occupied by such species as persimmon (*Diospyros virginiana*), wild plum (*Prunus americana*), and black cherry (*Prunus serotina*).

FAUNA

Although none of the wildlife species currently identified in the park are listed as rare or endangered in North Carolina, several species, such as the eastern white-tailed deer (*Odocoileus virginiana*) and wild turkey, (*Meleagris gallopavo silvestris*) are currently rare to this specific locality. Apparently, this is due to the intensive pressure from past hunting activities. It is expected, however, that relief from hunting pressures within the park will permit the gradual recovery of the deer population in the general vicinity. As a wildlife sanctuary, the park will serve as a nursery for restocking surrounding areas where hunting is permitted. In any event, a comprehensive faunal survey needs to be conducted in order to determine the existence of any rare species, and to effectively manage those present.

The park also provides a habitat for many other species of fauna, ranging from reptiles to birds and mammals. Reptiles include the black rat snake (*Elaphe Oo. obsoleta*), copperhead (*Agkistrodon c. contortrix*), eastern garter snake (*Thamnophis s. sirtalis*), rough green snake (*Opheodrys aestivus*), northern fence lizard (*Scleroporus undulatus hyacinthinus)* and five-lined skink (*Emercus fasciatus*). The Blue Ridge Mountain salamander (*Desmognathus ochrophaeus*), northern dusky salamander (*Desmognathus f. fuscus*), and Fowler's toad (*Bufo woodhousei fowleri*) comprise some of the amphibian species. Game fish include rainbow trout (*Salmo gairdneri*), brown trout (*Salmo salar*), and smallmouth bass (*Micropterus dolomieui*).

Most of the birds found in the upper Piedmont province of the State can also be found in the South Mountains area. The cardinal (*Richmondena cardinalis*), broad-winged hawk (*Buteo platypterus*), eastern belted kingfisher (*Megaceryle alycon*), and wood thrush (*Hylocichla mustelina*) represent but a few of these species.

Similarly, most of the upper Piedmont mammals can also be found in the South Mountains. The groundhog (*Marmota monax*), opossum (*Diedelphis marsupialis*), eastern cottontail rabbit (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), and the eastern gray squirrel (*Sciurus carolinensis*) are some of the more common mammalian species.

All waters within the park boundary are official "Public Mountain Trout Waters" and are managed by the N. C. Wildlife Resources Commission. Below its confluence with Shinny Creek, Jacob's Fork is classified as "General Trout Water." As such, it is periodically stocked with legal size trout. However, outside the park boundary in the vicinity of the abandoned gravel quarry and further downstream, Jacob's Fork is considered "marginal trout water" at best. This latter segment is particularly poor in terms of trout reproduction habitat. Although a few smallmouth bass are known to inhabit this stream segment, even fewer trout are present.

All other waters within the park are classified as "Native Trout" waters. Most provide relatively good trout habitat, including Jacob's Fork above its confluence with Shinny Creek. As

"Native Trout" waters, these streams are not stocked with catchable fish but are considered suitable for reproduction. Only artificial lures having one single hook may be used, and trout under 10 inches in length must be returned.

DEVELOPMENT LIMITATIONS

South Mountain State Park is characterized by extreme developmental limitations. Particularly limiting are the excessive slopes that dominate the vast majority of the park area. Since virtually all types of park facilites require slopes less than 15% (and most less than 8%), useable acreage within the current boundaries of the park is essentially restricted to a few valleys and ridgetops. Most of the valley and ridgetops are too narrow for any facilities other than trails. In addition, many ridge top locations lack potential water sources.

Special considerations must be recognized throughout the planning and construction process to assure adequate protection of streams from soil erosion and sedimentation. Particularly important is the trout fishery which would be adversely affected by any additional sedimentation. Although the soils found in the area are not particularly susceptible to erosion when located on relatively flat slopes, the steep physiography of the South Mountains contributes significant potential for erosion problems. In addition, frequently occurring shallow depth to bedrock, and occasionally low soil bearing strength and frost action, pose problems for building foundations as well as roadbeds. Areas covered with numerous surface stones interfere with most recreational activities, including trails.

Also deserving special consideration is the bear oak habitat, particularly in the vicinity of Simms Hall, and the High Shoals Falls area. Both are relatively fragile environments which harbor rare botanical species. As such, extra precautions must be taken to avoid disturbing these areas.

MASTER PLAN

SUMMARY (see map inside back cover)

The primary purpose of a State Park development plan is to protect significant geologic features, botanical communities, or other important natural features while allowing public access and recreational activities compatible with the site. Because the South Mountains are blessed with many such natural features, their protection is the primary objective of the South Mountains State Park Master Plan. Access and facility development will be limited in scope, resulting in a projected annual visitation of less than 100,000 persons per year. The ultimate proposed size of the park is approximately 8,500 acres.

Major emphasis will be placed on wilderness activities and experience. Almost 39 miles of hiking trails and 25 miles of horse trails will be developed and maintained. Thirty designated family primitive camp sites and two group camps, as well as an overnight horse camp, will be associated with the trail system.

A nature interpretation loop trail will provide access to both the top and bottom of High Shoals Falls. A wooden stairway on the Falls escarpment will complete the loop, serving to protect the fragile environment on the adjacent slopes. A small interpretive shelter will be located along the loop trail, providing natural history displays, information, etc.

Vehicular access into the Park will be limited exclusively to South Mountains Park Road (Headquarters Road) along Jacob's Fork. However, this road needs substantial improvements to be considered adequate for public access. It will terminate at a parking area in front of the existing park office and ranger residence. Fifty-four permanent spaces will be available, with overflow for forty additional vehicles.

A 32 table picnic area will be developed adjacent to the main parking area. Included will be a group shelter designed to accommodate up to 60 persons.

Outside of the existing park, 24 horse trailer parking spaces will be established in an existing field accessible to the main park access road via a short connector. Nearby, in an area already used for camping, a small family tent and trailer campground consisting of twenty-three sites will be developed.

At the abandoned gravel dredging site on Jacob's Fork, downstream from the current park boundary, a thirty-two acre lake is proposed. The lake impoundment will provide for a number of day-use activities, including: swimming, sunbathing, fishing, rowboating and canoeing (no power boats). Facilities will include a 200 linear foot sand beach, bathhouse, boathouse and docks for sixteen rowboats and eight canoes, and 101 parking spaces.

Near the park entrance, a small combined office-maintenance center will serve the park. Two new ranger residences and an employee barracks will be located nearby.

DEVELOPMENT PLAN

WILDERNESS USE

The 64 miles of hiking and horseback riding trails are situated to take optimum advantage of existing roads and trails. Both trail systems provide a series of inter-connected loops of varying lengths, thus permitting a great deal of flexibility for park users in terms of travel distance, length of stay, and natural features to be visited. The trails will link the various natural features with park activity areas.

Virtually all of the 25 miles of proposed horse trails are restricted to ridges, coinciding with old jeep trails. Slopes are relatively gentle, minimizing potential erosion hazards. Stream crossings will be kept to a minimum in order to protect the park's streams from any potential degradation. In addition, the horse trails will be utilized as a means for park patrol and emergency access. As long as horse trail usage remains relatively moderate, it is anticipated that hikers will also use them. The horse trail system will emanate from a parking area specifically designated for horse vehicles. This area will be located in a field across Jacob's Fork from the primary park access road, just outside the existing park boundary.

Trail alignments for hikers will be somewhat less restrictive than the horse trails. While some hiking/backpacking trails will follow ridges, several segments of the park's 39 mile system will follow various streams. The latter will provide relatively easy grades, as well as access for trout fishermen. The hiking/backpacking trail system will emanate from the main parking area at the terminus of the park access road near the existing park office.

Several primitive camps will be strategically located along the trail systems, providing services for various types of wilderness users. The camps will make optimum use of the trail systems. Because each camp will serve several major trail loops, excursions of varying lengths will be possible. Horseback riders will be able to take two-day, one-night trips without retracing their steps, whereas, family and group backpackers will have an option for excursions of up to three days, staying in different camps for two consecutive nights.

Two family primitive camps will be situated in the interior of the park in separate locations, one near Murray Branch and the other along Possum Trail. Each will be comprised of 15 individual campsites approximately 150 feet apart in a linear configuration along a trail. Each campsite will serve up to four individuals. Facilities will include a fire circle or grill and tent site, along with a common water source (hand pump well preferred), two pit privies, and a firewood stack for each camp.

Located in the northeast and southwest corners of the park will be two primitive group camps, one near Chestnut Knob, and the other on Rich Mountain. These camps will each be comprised of 12 clustered tent sites, arranged about a common open space for use by organized groups of up to 50 persons. The open space, or field, will serve as a location for assembly and various group activities. Each camp will have a common water source (hand pump well preferred), two pit privies, a firewood stack, and a single large fire circle.

A single overnight horse camp is proposed off the upper end of the High Shoals Road Trail, near its junction with the Lower CCC Road. Located in an existing field, this camp will provide a central water source, 12 tent sites, two pit privies, a firewood stack, fire circles or grills for each site, as well as 24 tie-racks for the horses.

HIGH SHOALS FALLS

High Shoals Falls will serve as the primary focal point within the park for most visitors. However, because of the fragile environment in the vicinity of the Falls, as well as the need for protecting rare plants on the adjacent slopes, special precautions are necessary in order to provide visitor access.

A wooden stairway will be constructed from the bottom to the top of the Falls to eliminate the need for visitors to scramble up the adjacent slopes. Thus, any further environmental damage would be avoided. The stairs will provide a direct view of the Falls from observation platforms at the top and bottom, but will otherwise be situated away from the Falls. Both the stairway and observation platform designs must be as unobstrusive as possible.

The stairway and Falls area will be linked to the main parking area, about a mile downstream by a loop interpretive trail. This trail will serve not only as access to the Falls, but also as a nature study corridor. Self-guided, the trail will utilize a sequence of stopping points located in close proximity to a variety of botanical, geologic and other natural features. A brochure, keyed to each of the designated stopping points, will interpret various natural features for the park visitors.

It is anticipated that this trail will be the most extensively used in the park. The trail will generally follow the existing trail along Jacob's Fork from the parking area to the base of the Falls. However, due to the ruggedness of the route with its numerous slippery rocks and boulders, some segments of this portion of trail may have to be relocated on an elevated boardwalk.

Above the Falls, the loop trail will proceed to the large field where camping is currently permitted. An interpretive shelter will be located at this point, serving a variety of functions. The trail will then follow an old logging trail back to the confluence of Jacob's Fork and Shinny Creek, and ultimately to the main parking area for a total distance of about two miles.

The interpretive shelter will consist of a small 200 square foot structure, open on three sides. The shelter will provide more detailed interpretive information, natural history displays, as well as an educational display on conservation principles. It will also serve as a rest stop for hikers, and as storage for first-aid and fire fighting equipment.

BEAR OAK AREA

Special precautions and interpretive efforts will also be afforded the Bear Oak Area. A half-mile side trail along the old Upper CCC Road will lead visitors from the main park trail system to the relatively unique bear oaks. An interpretive display will inform visitors about this unusual species and its ecological role.

PICNIC AREA

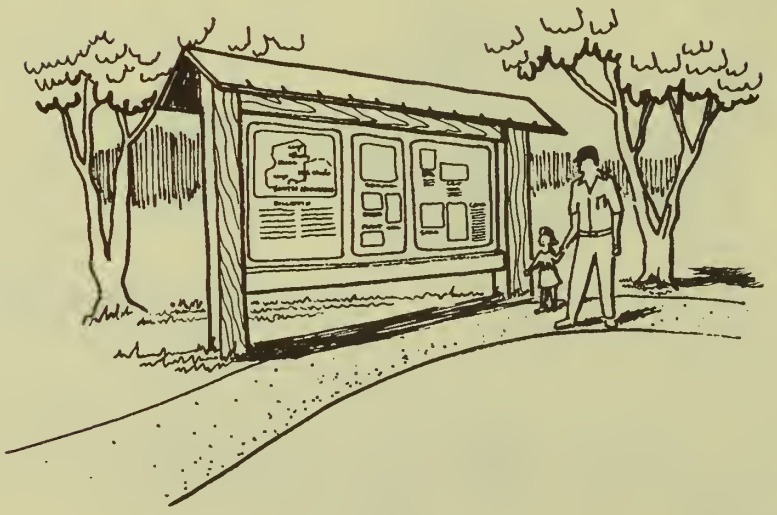
The picnic area will be located in the relatively flat wooded area along Jacob's Fork, just west of the existing ranger residence. Approximately eight acres in size, the area will accommodate 32 family picnic tables. Associated with the family picnic area will be a water source and a toilet building with flush toilets. Grills and trash containers will also be provided.

A sixty person shelter, covering eight tables, will accommodate organized groups such as family reunions and school classes. The shelter will replace the existing maintenance building, and will be open on three sides, with a large fireplace on one end.

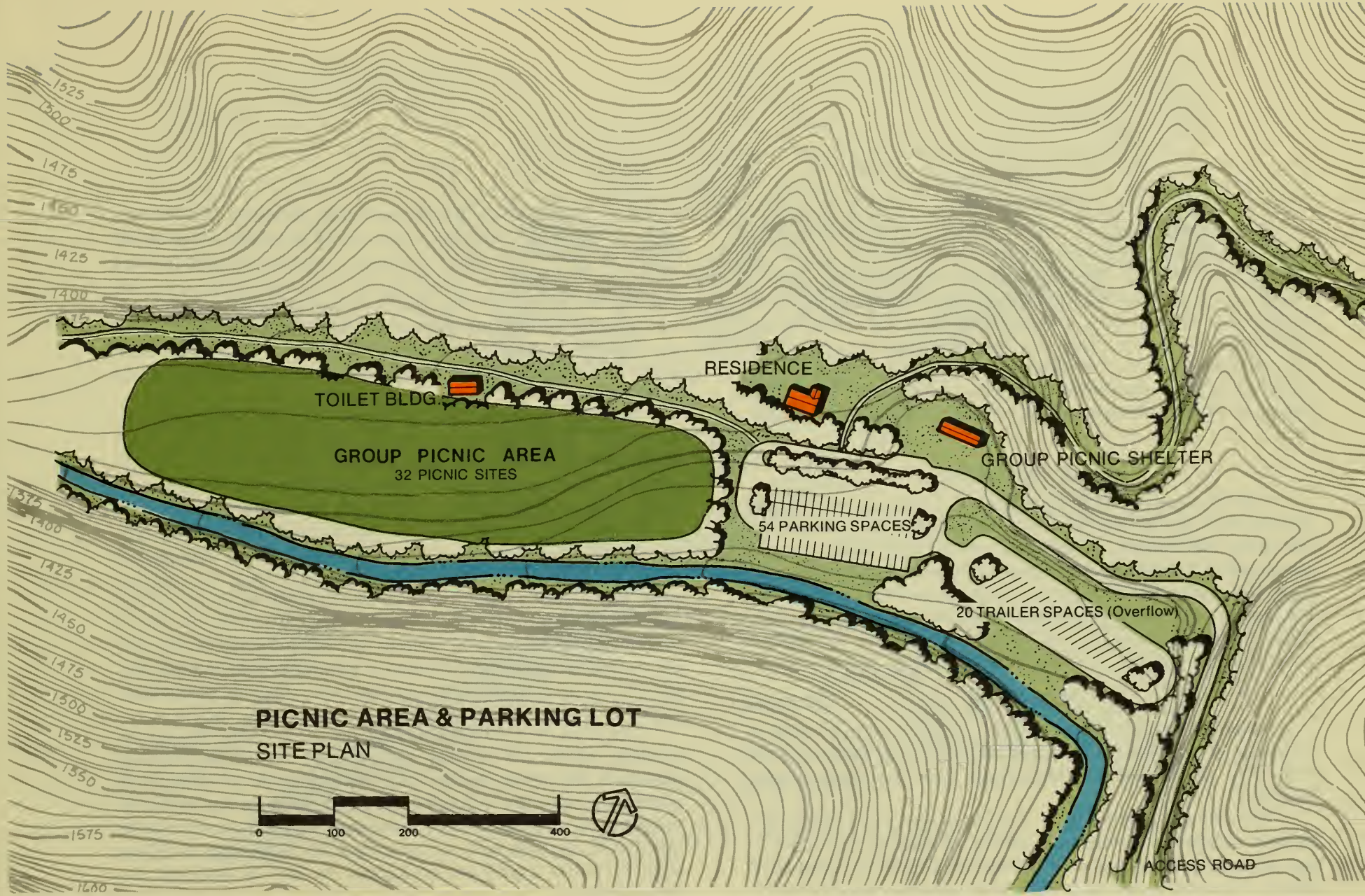
The adjacent parking area will serve not only the picnic area, but also hikers and backpackers. Fifty-four vehicles will be accommodated on a permanent basis, with 40 overflow parking spaces for use on peak days. As the park's primary parking area, it will also function as a major control mechanism for limiting the number of visitors to the park's interior.

The existing ranger residence will remain in its present location.

INTERPRETIVE SHELTER



INTERPRETIVE DISPLAY



PICNIC AREA & PARKING LOT
SITE PLAN

CAMPGROUND

A small family tent and trailer campground is proposed for the same area that is currently used for camping within the South Mountain (Champion International) Game Land. The site is located along the Park Access Road, approximately 0.6 mile from its terminus. Twenty-three tent and trailer sites will allow for optimum use of the area. Each site will have a pull-off with a tent pad, picnic table, grill, and trash container. A small toilet building will provide flush type sanitary facilities and water. No electrical, sewer, or water hookups will be provided for individual campsites.

HORSE TRAILHEAD

Just upstream from the campground, on the opposite side of Jacob's Fork, is a small field which will serve as the trailhead for the horse trail system. Twenty-four vehicle and trailer parking spaces will be provided with a short connector to the main park road. The connector will basically follow an existing jeep trail but will require reconstruction of the bridge crossing Jacob's Fork. Other proposed horseback riding facilities include a single pit privy, trash containers, and 12 horse tie-racks.

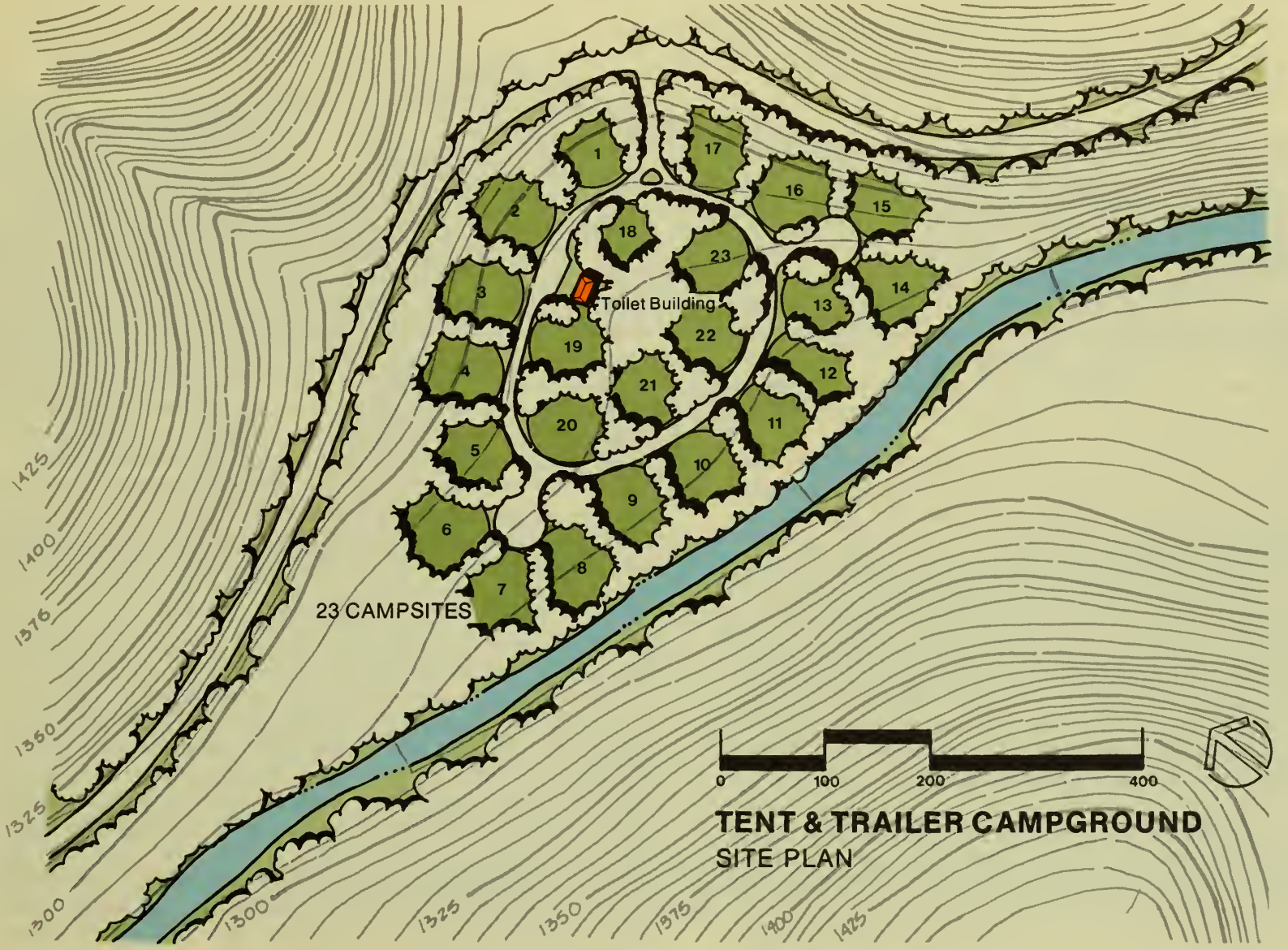
LAKE COMPLEX

Based on overall favorable public input, a 32 acre lake is proposed at the abandoned gravel dredging site along Jacob's Fork. The site is located downstream from the existing park boundary.

The lake will provide for a number of day-use activities including: swimming, sunbathing, fishing, rowboating, and canoeing. Support facilities include a 200 foot long by 50 foot wide sand beach, a moderate size bathhouse (500 persons capacity) with a snack bar concession, a boathouse and docks for 16 rowboats and eight canoes. No power boats will be permitted. Parking will be rather limited with only 101 spaces. Because the total number of visitors is directly related to the number of parking spaces (no parking will be permitted except in designated spaces), the number of visitors at any one time will be restricted accordingly. Thus, the intensity of use that would likely occur if an attempt were made to satisfy the actual demand for lake-front facilities will be effectively reduced.

The lake complex will be oriented primarily towards fulfilling the recreation needs of non-wilderness day users. Such users include elderly and handicapped individuals who are not capable of hiking relatively rugged mountain trails, as well as a large number of individuals who prefer non-wilderness park activities. Because the lake is near the extreme edge of the proposed park boundary just inside the entrance, it is expected to have very little, if any, impact on the rest of the area. The vast majority of the park's total proposed size of 8,500 acres will still be devoted to wilderness use. Furthermore, only a small minority of swimmers, fishermen and boaters who are attracted to the park by the lake activities are expected to wander into the interior portions of the park, beyond High Shoals Falls. Thus, the solitude enjoyed by wilderness users will be preserved.

The area inundated by the lake will be contained almost exclusively within the already cleared and disturbed dredging operation site along Jacob's Fork. Consequently, environmental damage is expected to be limited. In fact, because the impoundment site is already severely damaged from an environmental standpoint, development of the proposed lake offers a unique opportunity for significant ecological, as well as aesthetic improvement.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Toilet Building
23 CAMPSITES
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TENT & TRAILER CAMPGROUND
SITE PLAN

Presently fish production in the affected stream segment is considered marginal. But in the opinion of North Carolina Wildlife Resources Commission biologists, fish productivity (including trout) will be substantially improved as a result of construction of the proposed lake. Future trout reproduction will be assured by their unrestricted access to streams feeding into the lake. Furthermore, no significant detrimental impact is anticipated downstream from the lake. In fact, it is conceivable that water temperatures and sedimentation problems could be ameliorated by the impoundment.

Questions regarding the feasibility of the lake proposal, from an engineering and safety standpoint, were addressed by a preliminary study conducted in cooperation with the U.S. Soil Conservation Service. Basically, the study concluded "there would appear to be few limitations with this area for dam construction." However, it did caution that further study would be necessary, particularly regarding the geologic characteristics of the slope on the south side of the proposed dam. It also concluded that earth fill from the bottom of the proposed impoundment would not be suitable for a dam, and should be obtained from the fringe of the lake or an adjacent area where it is suitable. However, while an earth dam is likely feasible, a substantial concrete spillway will be necessary in order to handle periodic floodwaters.

PARK OFFICE/MAINTENANCE CENTER

A small combined office-maintenance center will be located between the park entrance gate and the lake. The office will serve as the primary information and administrative center for the park. Camping permits, information, and other requests will be handled here. Twelve parking spaces for visitors are proposed.

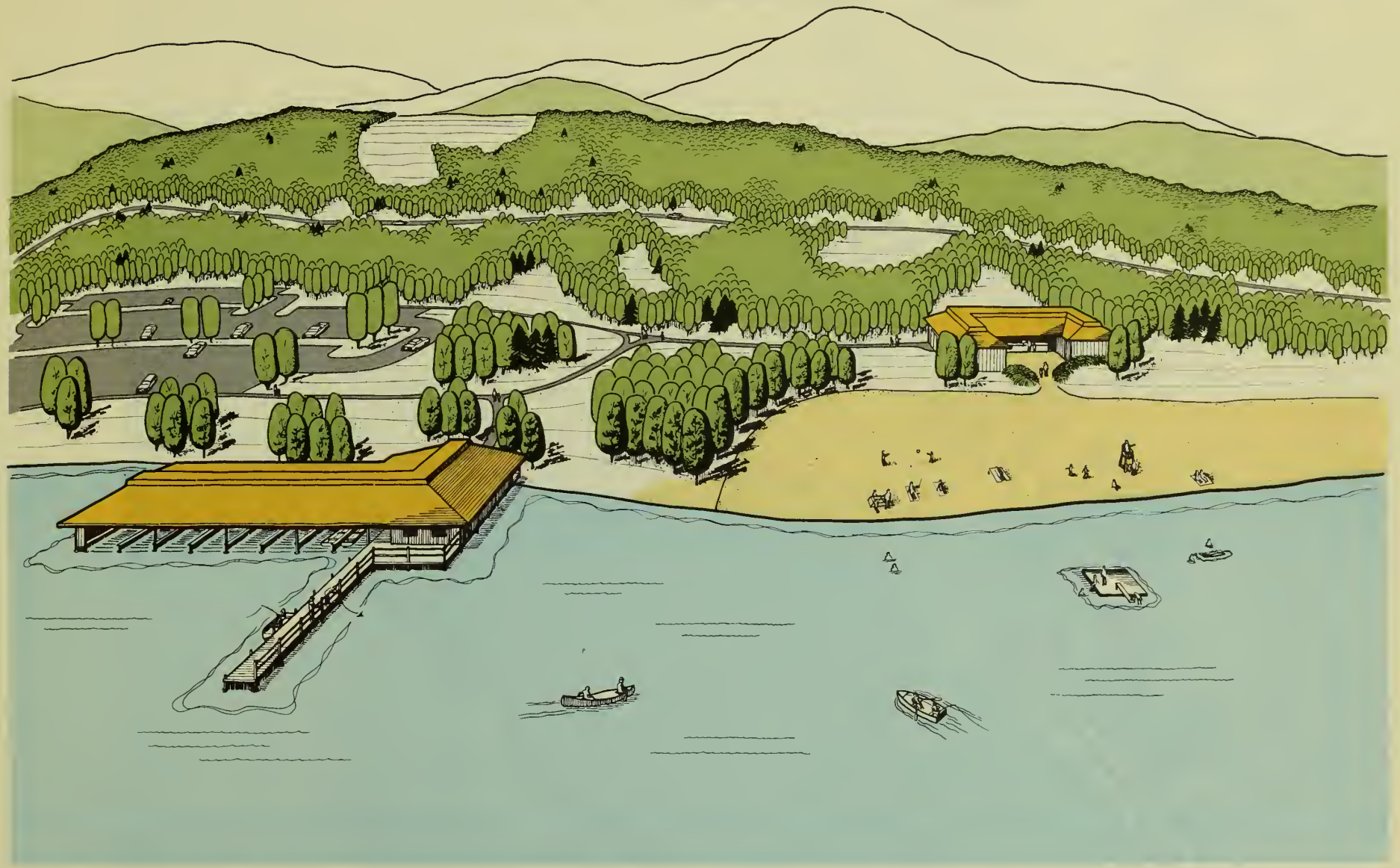
In conjunction with the proposed office will be the new maintenance center. This facility could be situated in a common building with the office, or a separate structure in close proximity, as long as park maintenance personnel can monitor the office when necessary. The maintenance center will provide storage space for park supplies, equipment, and vehicles, along with a workshop for minor machinery repair and construction projects.

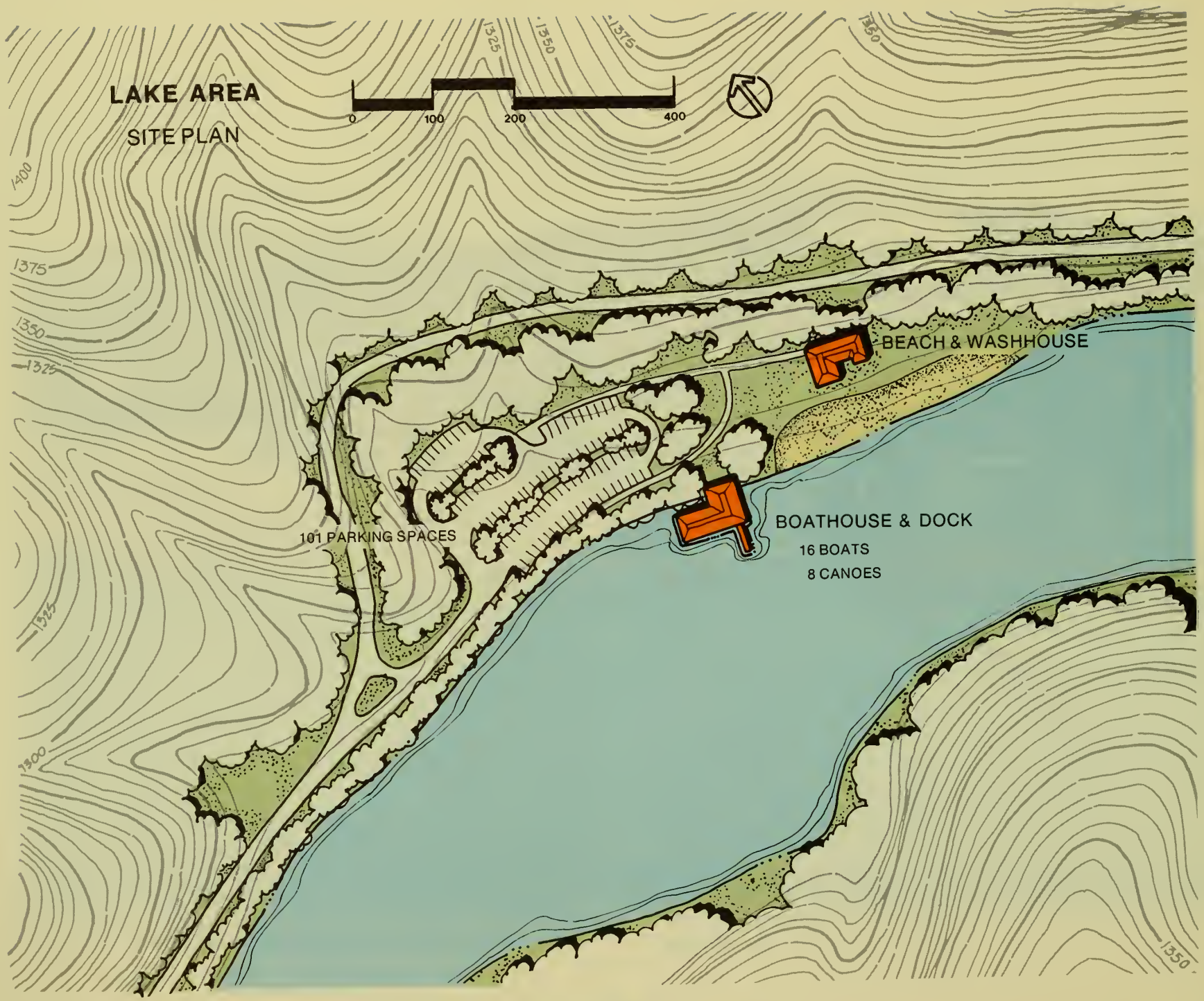
Two ranger residences are proposed to be located on a knoll overlooking the Lake, across the park access road from the office. Although somewhat secluded, resident rangers will be afforded ample opportunity for full-time surveillance of major facilities on the Lake. A nearby barracks building will house eight seasonal employees. Just below the residences and barracks building, the main park gate will be situated on the park access road for security.

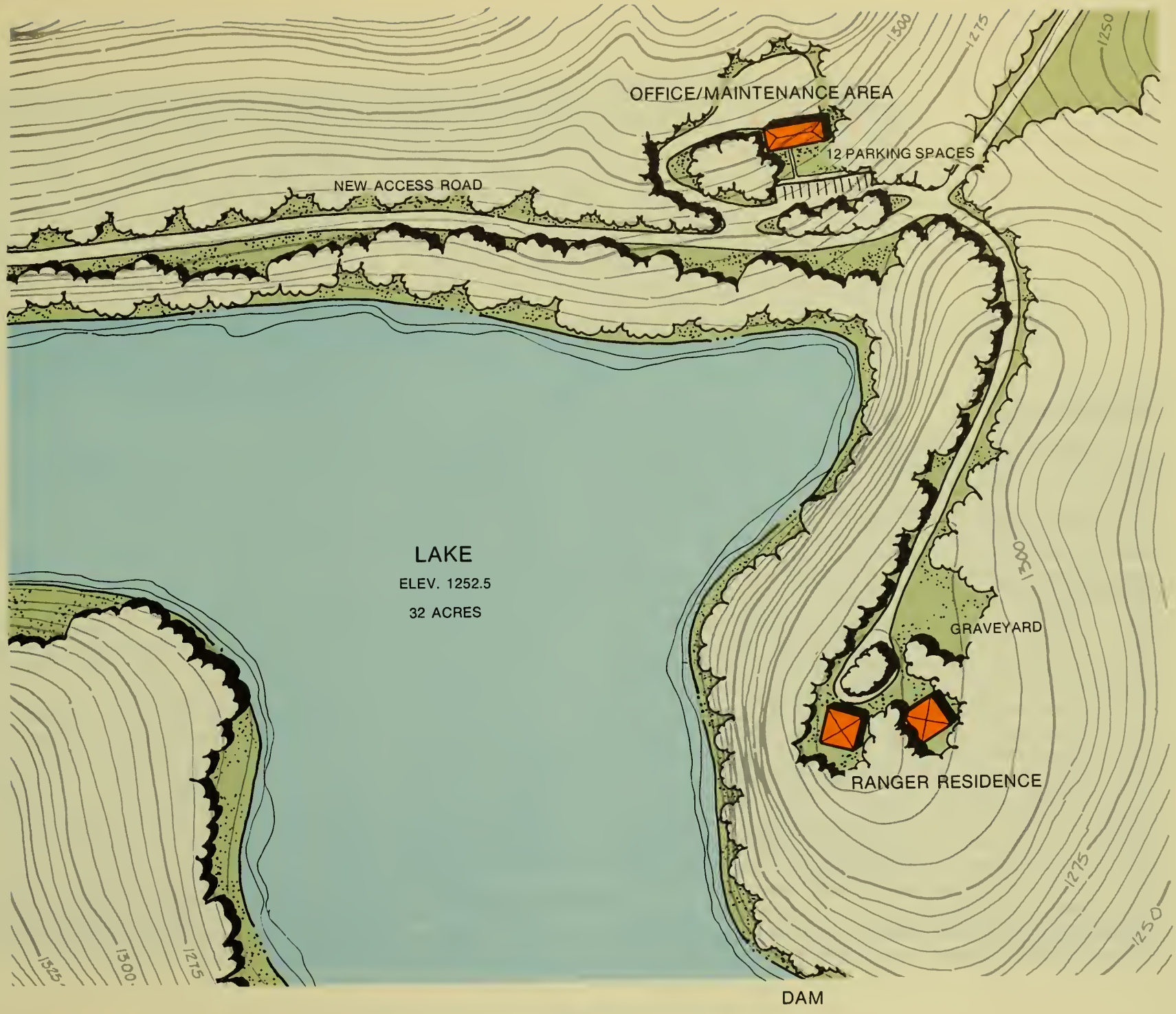
ACCESS

The existing road along Jacob's Fork (Headquarters Road) will serve as the only vehicular access route into the Park. However, it will require substantial improvements. Widening will be necessary from the old York homestead to the existing park office. Certain sections need realigning, particularly those downstream which are being continually washed-out. Construction of the Lake complex will also necessitate realignment of a section of road (the existing road passes through the proposed sand beach).

A new bridge is necessary at the existing ford. The ford is frequently impassible for automobiles due to high water. Eventually, all three one-lane bridges along S.R. 1904 will also need replacing with two-lane structures.




LAKE AREA
SITE PLAN
0
100
200
400
1400
1375
1350
1325
1300
BEACH & WASHHOUSE
BOATHOUSE & DOCK
16 BOATS
8 CANOES
101 PARKING SPACES


OFFICE/MAINTENANCE AREA
12 PARKING SPACES
NEW ACCESS ROAD
LAKE
ELEV. 1252.5
32 ACRES
GRAVEYARD
RANGER RESIDENCE
DAM
1500
1275
1250
1300
1325
1300
1275
1250

INTERIM PLAN

The interim plan attempts to make optimum use of existing park land. It includes thirty-four miles of designated hiking and horse trails, of which about two-thirds will be designated for hikers and backpackers only. An additional five miles of horseback riding trail through the South Mountains Gameland may be feasible (except during hunting season) if a cooperative agreement can be reached with Champion International. This trail would traverse the Gameland via Short Road and the Upper CCC Road, joining the rest of the Park's trail system along Horse Ridge. All of the interim trails follow proposed permanent alignments, and, like the trail systems proposed in the master plan, will provide a series of inter-connected loops of varying lengths.

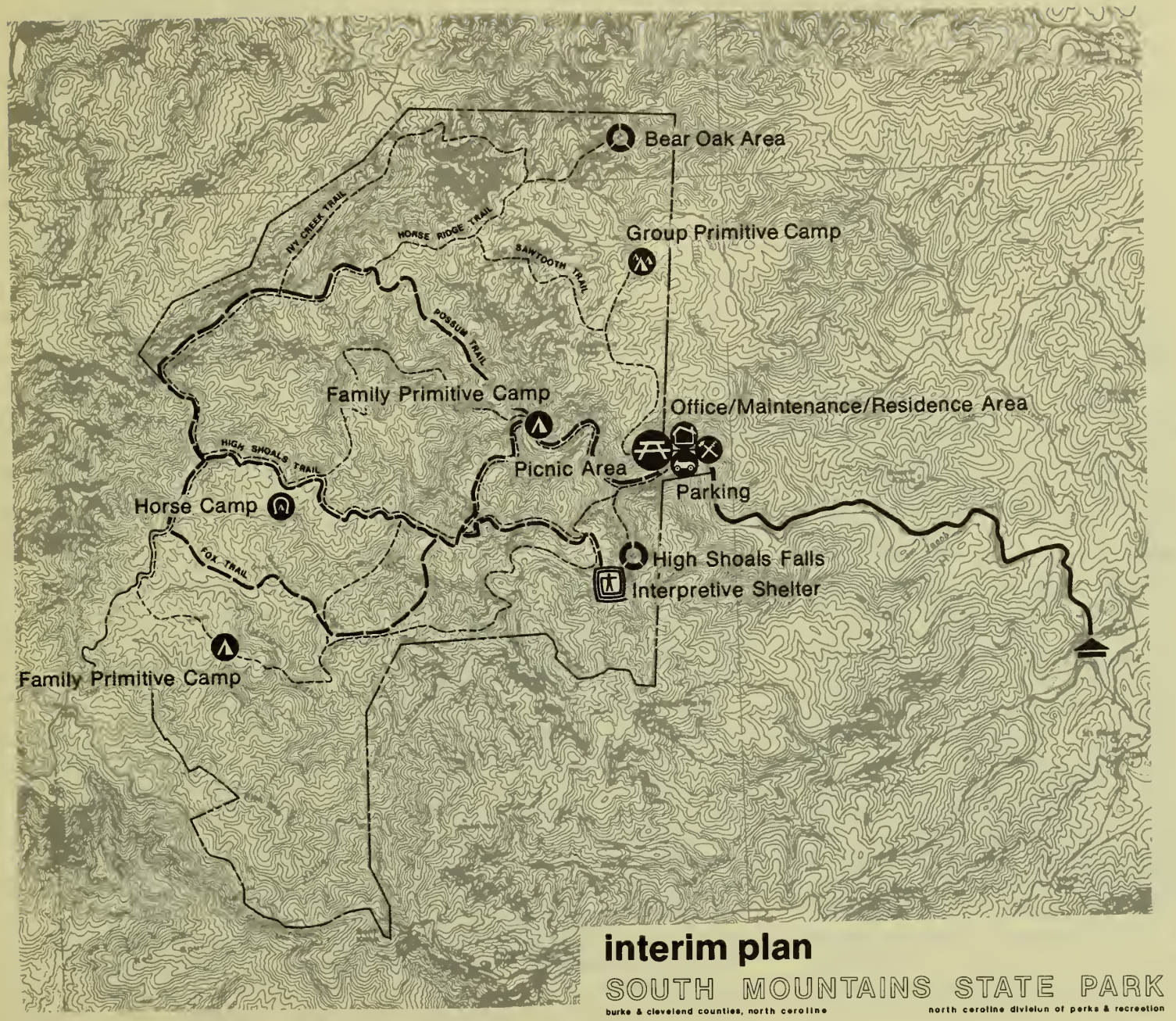
Several of the proposed primitive camps, as well as one existing primitive camp, are included in the interim plan. One group primitive camp will be established near Chestnut Knob. The permanent Horse Camp will be established off of High Shoals Road, but only partially completed during the interim phase of park development. A new family primitive camp will be partially developed on a ridge just north of Murray's Branch. The existing primitive camp along Shinny Creek will remain, for use by families and small groups. All of these areas will require pit privies. Efforts must also be made to develop water sources at the permanent sites. Meanwhile, the existing camp above High Shoals Fall will be phased out with campers being dispersed to the other designated areas.

Construction of the proposed stairway at the Falls is a high priority. The loop interpretive trail, providing access to the Falls, will be established with some improvements made along the more difficult sections of trail. The proposed interpretive shelter will also be constructed above the Falls, in the field currently used by campers.

The existing picnic area will be moved downstream to its permanent location. However, the number of tables will be doubled to a total of 12. Two temporary pit or vault-type privies will be necessary.

The permanent 54 space gravel parking area will be developed in front of the existing ranger residence. This area will serve all of the park's visitors, including hikers, backpackers, picnickers and fishermen. In addition this lot will also serve as a trailhead for horseback riders during the interim period of park development. A water source should be developed beside the parking area at the entrance to the main trail to the picnic area and the Park's interior. Both the existing ranger residence and maintenance shed will remain.

Improvement of the Park's access road remains the top priority. Grading, widening and surfacing with gravel along the road's existing alignment is the minimum action necessary to assure immediate public vehicular access to the Park.


Bear Oak Area
Group Primitive Camp
IVY CREEK TRAIL
HORSE RIDGE TRAIL
SAWTOOTH TRAIL
POSSUM TRAIL
Family Primitive Camp
Office/Maintenance/Residence Area
HIGH SHOALS TRAIL
Picnic Area
Parking
Horse Camp
FOX TRAIL
High Shoals Falls
Interpretive Shelter
Family Primitive Camp
LEGEND
HIKING TRAIL
HORSE TRAIL
ROAD
BOUNDARY
interim plan
SOUTH MOUNTAINS STATE PARK
burke & cleveland counties, north carolina
north carolina division of parks & recreation
feet
meters

ACQUISITION PLAN

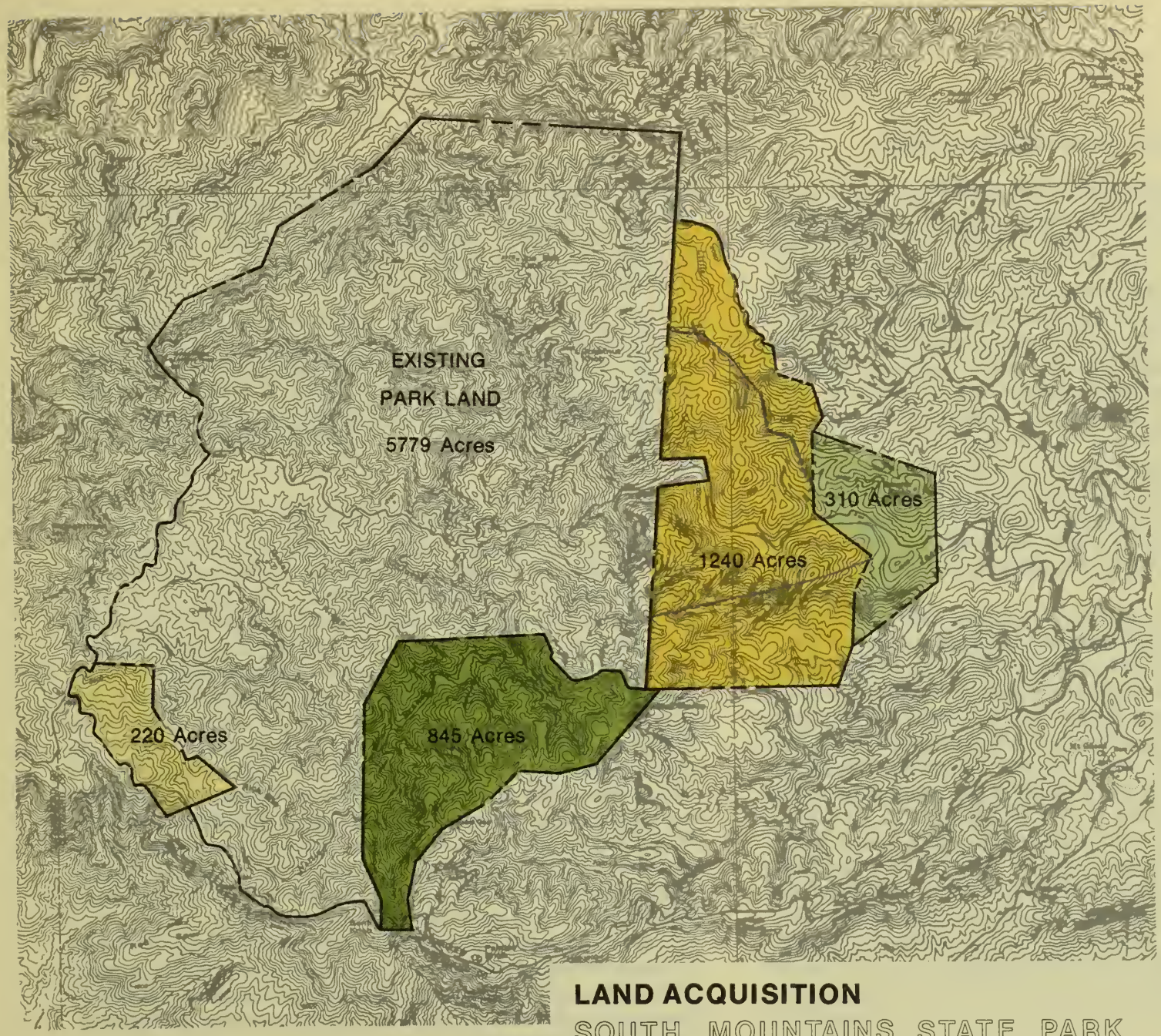
Present State ownership includes 5779 acres within South Mountains State Park. The area is predominately rugged terrain with severe limitations for most types of park facilities. This fact, coupled with the need for additional protection of the park and adjacent natural features, necessitated development of a plan for acquisition of additional lands.

The first priority provides for the addition of approximately 220 acres on the southwest corner of the existing park, 92 acres of which are property of the N.C. Wildlife Resources Commission. Primarily because of its remoteness, this area is considered difficult to patrol and manage. Due to the relatively small size of the W.R.C. tract and the difficulty in defining its boundaries, poaching within the adjacent park has become a significant problem. In addition, these tracts are part of the upper reaches of the Jacob's Fork watershed, and must be protected from any future uses which may have an adverse impact on areas downstream. Thus, acquisition of the W.R.C. property, as well as 128 $\pm$ acres of adjacent private land is considered essential for proper management and protection of the park.

Priority two proposes acquisition of approximately 1240 acres of corporate timber lands on the eastern perimeter of the park. This will assure protection of two geologic features along the Little River including Little High Shoals Falls, control of illegal access to the park via Short Road, and elimination of illegal hunting within the park. In addition, procurement of this property will allow development of the proposed tent and trailer campground, a horse trailer parking area, as well as completion of vital links in the overall hiking and horse trail systems. It will also provide a more definable park boundary along existing roads, and ridges, and will allow easier surveillance of the park perimeter.

Also critical for protection of the park is the priority three tract, consisting of approximately 845 acres of privately owned land on the southeast edge of the park. This tract has been designated for expansion of an adjacent private resort. However, because this land lies within the Jacob's Fork watershed above High Shoals Falls, any significant development would likely pose a threat to the primary park feature. Concerns include the future possibility of sedimentation problems, restricted water flow, contamination by sewage effluent, questionable geologic suitability for a dam structure and consequent safety considerations for persons and property downstream.

Priority four, comprised of about 310 acres on the lower reaches of Jacobs Fork, contains the bulk of accessible and developable land in the immediate vicinity of the park. Acquisition of this area will permit construction of the proposed impoundment with its associated water-based recreational activities. Furthermore, it will provide more suitable locations for ranger residences, a park office — maintenance center, summer employee barracks, as well as a more appropriate park entrance.



LAND ACQUISITION

SOUTH MOUNTAINS STATE PARK

burke & cleveland counties, north carolina

north carolina division of parks & recreation

PARK MANAGEMENT CONSIDERATIONS

SERVICES FOR PARK USERS

Established programs currently practiced in other state parks, particularly those for visitor protection, law enforcement and visitor information, must also be carried out at South Mountains State Park. All North Carolina State Parks are protected and governed by law. State Parks Rules and Regulations are a part of the *North Carolina Administrative Code* and are found under Title 15, Department of Natural Resources and Community Development, Chapter 12, entitled *Parks and Recreation Area Rules.* The Park Superintendent is responsible for enforcing these rules for protection of both the resource and its user.

Routine patrol by park personnel, as well as good working relations between the N.C. Division of Parks and Recreation and local law enforcement agencies, are necessary for adequate protection of visitors and their property. Overnight visitors must be afforded additional security by keeping the park gate locked to protect from intruders.

Patrol of the park, including use areas, roads, and trails, should be conducted systematically. Mobile patrol units should be radio-equipped as should the park office. Use of horses for patrolling park boundaries and trails should be seriously considered as an alternative to motor vehicles. Patrolling on horseback is considerably more compatible with the wilderness theme of the park, and will significantly reduce undesirable effects on the wilderness experiences of park users that could occur with the use of motor vehicles for routine patrolling.

Rugged terrain and access difficulties have also created some specific needs for visitor safety at South Mountains State Park. Emergency procedures plans have been established to reach those who might become ill or injured while in the park. Close liaison with local emergency medical service teams and rescue squads has been established and maintained. This should be continued and expanded. As an added precaution, a telephone, which may be used for emergency situations, is located in the park.

A well designed and up-to-date information service for park visitors is essential. Visitors should be well oriented to the location of park facilities, trails, features, and available programs. In addition, through the information facilities, visitors should be acquainted with park regulations and philosophy.

The park office will provide information regarding orientation and activities through use of displays and brochures, as well as, verbal communication. Supplementary information will be available at various use areas on display boards and in pamphlet dispensing boxes. A trail map will illustrate the location and destination of the various hiking, interpretive, and horse trails. Pamphlets, signs and exhibits will describe points of interest on each trail.

USER CONFLICTS

Due to the inherent nature of certain park activities, some user conflicts are inevitable. Management efforts will be necessary in order to reduce these conflicts.

Dispersing use throughout the park is one method to reduce potential user conflicts. Time zoning may also be used to control visitation in a given area during peak periods. This will tend to reduce conflicts between users and ensure adequate turnover rate so that opportunities may be available for all users. Actual time limitations at South Mountains State Park may be set beyond normal operating hours if it is determined to be necessary.

At least 9.6 miles of horse trails will be shared by hikers. As use intensifies by either category of user, the probability of conflict increases. Horses on trails create problems for hikers using the same trails. Some hikers are offended by horse manure and urine deposits in the trail track. The hooves of the horses compound erosion and compaction problems on trails.

Muddy conditions in wet areas are also increased due to the passage of horses along the trails. There also exists a psychological phenomenon in which the hiker feels at a disadvantage and slightly threatened upon being overtaken or meeting mounted riders on a trail.

Riders, too, experience some problems in sharing trails with hikers. Riders must be alert to hikers' presence in order to reduce the possibility of accidents causing injury to themselves, their animals or hikers. Horses must be firmly restrained when passing hikers.

Both types of users expect and deserve a quality park experience. Each has entered the park with differing means to pursue his or her own goal(s) of solitude, scientific interests, mental rejuvenation, adventure, fellowship, recreation, physical health or other personally beneficial pursuits. The park superintendent, as he or she performs the duties required in providing services to the trails' users and maintaining the park, must be aware of the needs of each user type and of the effects one has on the other.

Several actions may be employed by the superintendent administering the dual-use horse trail program to help alleviate potential problems at South Mountains State Park. All trail users must be informed and educated as to which trails are designated for particular user groups, especially hiking trails. Dual-use trails may be regulated by the superintendent by establishing "traffic rules" which indicate the right-of-way regarding both riders and hikers. Signs or pamphlets may be utilized. Informative literature may also be developed so that the hiker and horseback rider may each learn of the ramifications of their use of a dual-use trail.

Development of the proposed lake may also create some potential user conflicts between fishermen, boaters, and swimmers. Consequently, some restrictions will be necessary.

As discussed earlier, the number of boats and canoes will be limited to 24 in order to insure an adequate number of surface water acres per boat. This will significantly reduce potential conflicts among fishermen and between fishermen and boaters. Boats will be permitted to dock at the designated docking area/ boathouse only. Docking or tying-up along any shoreline will be prohibited. Furthermore, no power boats will be allowed and boats will not be permitted within the designated swimming area.

Conversely, no swimming will be permitted outside the beach-swimming area. Bank fishing will only be permitted along certain stretches of the lake's north shore, outside the swimming area. Swimming safety will be the responsibility of park personnel.

ENVIRONMENTAL CONSIDERATIONS

Resource protection is also an important facet of park management. Park boundaries must be well marked and patrolled regularly to prevent encroachment, development of unauthorized new trails, game poaching and other undesirable uses. Efforts are also necessary to control visitor uses, particularly in sensitive environments.

Occasionally, adverse conditions may even warrant closing all or portions of the park for resource, as well as, visitor protection. Examples of these conditions are fire or severe fire hazards, flood, hazardous driving or traveling conditions, mud slides, or drastic reductions in manpower to safely administer a site or program.

High Shoals Falls and the surrounding plant communities comprise a very fragile and significant environment. Vegetation along the slopes is rich in unusual fern species, cove hardwood forest species and contains populations of Carolina beech drops (*Monotropsis odorata*), a threatened peripheral species. All appropriate efforts should be made to avoid damage to the slope vegetation, including educational displays, frequent ranger patrols, and even stationing park personnel at the Falls during periods of peak usage.

The Sims Hill area contains populations of two rare species — bear oak (*Quercus ilicifolia*) and witch alder (*Fotherqilla major*). The bear oak is a small tree usually growing to approximately one meter in height which may be shaded out by surrounding vegetative growth. Because of the successional nature of this threatened species, some specific management will be necessary. Tagging of all individuals should be done followed by cutting of adjacent shrubs and small trees which may shade the oaks. However, a precise management plan must first be developed.

The N.C. Forest Service has periodically maintained the Upper CCC Road, which passes through the Bear Oak Area, for fire control. Maintenance has included a roadside brush cutting program. However, the program currently includes tagging the bear oaks so that they will not be cut. Continued communciations with the Forest Service regarding protective measures should be maintained.

Both the High Shoals Falls and Bear Oak Areas should be controlled for hiking and intepretive purposes only. Furthermore, acquisition of the remaining bear oak population just north of the present park boundary, should be pursued to help ensure its perpetuation.

Other areas of the park will also require some measure of visitor control. The most effective measure will be control of the total number and location of vehicle parking spaces. The finite number of spaces will, in essence, limit the number of visitors in the park at any one time. No parking will be permitted in unauthorized areas. Other controls include gates, railings, vegetative screens, berms and other visual and physical barriers along roads and trails, proper trail and road location, and a public education program on the merits of resource protection.

As mentioned previously, the physical distribution of park visitors is also a paramount management consideration. Although the park plan encourages dispersed use throughout the park, certain areas will inevitably receive intensive use. High Shoals Falls, the picnic area, and the beach complex will likely require concentrated management and supervision efforts; not only to preserve the natural environment, but to provide desirable visitor experiences.

Another special consideration for protection of the park's resources, is the control of horses within the park. A primary concern is water quality of park streams. Horses must be kept away from stream banks, and stream fording minimized. Construction of suitable bridges across streams is recommended. Virtually all horse trails in the park will be situated on ridges.

Because of the concentration of horses at the trailhead parking area, a build-up of manure is likely to occur. Consequently, a two-three foot high berm and/or interception ditch is recommended below the parking area to intercept animal waste before it can reach Jacob's Fork.

Vigorous efforts must also be made to reduce damage to the floral community. Riders must be informed to restrain horses from browsing along trails. Furthermore, riders must be required to remain on the designated trails in order to limit any compaction or erosion problems.

Effects of the proposed horse camp upon the park environment should be monitored by the park staff, both to prevent resource deterioration and to provide information to planners of other such facilities for future use.

Completion of the lake complex will present the park superintendent with a number of special management situations. The sanitation classification for Jacob's Fork must first be reclassified "B" in order to allow water body contact activities. Swimming must be controlled through design, as well as through bathhouse operating procedures. It will be permitted only in the vicinity of the sand beach.

Fishing will be restricted to boats and designated portions of the lakeshore where erosion potential is limited. The number of boats will be limited to the proposed 24 state-owned rowboats and canoes, with no motors permittted.

Allowances must be made in the upper reaches of the lake for the accumulation of natural sediment. Eventually, a marshy area will develop, providing excellent wildlife habitat. However, provided the watershed is protected and sediment limited, the sediment filled portion of the lake will remain relatively small. Thus, interference with other lake activities will be minimal, and dredging of sediment will be unnecessary for the foreseeable future.

The lake will be stocked and managed as a cold water "put and take" trout fishery in accordance with Wildlife Resources

Commission regulations. Future stream classifications, and subsequent regulations for South Mountains State Park will largely be based upon data resulting from the current Wildlife Resources Commission's Trout Stream Evaluation Study.

Sewage waste management is a problem which must be dealt with in order to protect park resources. Any septic fields must be located a minimum of 50 horizontal feet from any streams or water bodies. A 100-foot buffer is more desirable if practical. In any event, the Burke County sanitarian must approve the location of the septic fields as well as water sources (wells). Adherence to these restrictions is expected to have no effect on the town of Newton's water intake system, downstream in Catawba County.

INTERPRETATION

This park will serve as an example of the piedmont-mountain transition in terrain and biology. Visitors to the park should therefore gain some insight into how this area developed and why the plants, animals, artifacts, and rock formations they see are there. Exhibits at the interpretive shelter should be informative but not so detailed as to discourage the visitor. The ultimate goal of the interpretive program is to provoke the park visitor's interest rather than to merely disseminate information.

From an aesthetic, as well as biological standpoint, there are a number of attractive features within the park. The rock/boulder strewn stream beds, High Shoals Falls, and the general relief of the area offer outstanding scenic amenities and geologic interest. A population of the rare bear oak and witch alder in the Sims Hill area represents a very unusual plant association. The slopes adjacent to High Shoals Falls have a number of significant species including various ferns and Carolina beech drops. Such species should be described in the interpretive programs but access to them should be limited.

The most evident natural features at South Mountains, however, are the terrain and geology. The steep foothills of the Blue Ridge Escarpment provide the substrates and gradients for the life forms present there. The acid rock is parent material for soils which are the substrates for the various forest types growing in them. High Shoals Falls is also a component of this central theme with thousands of gallons of water cascading over its steep slopes.

Alterations to this region can be read from the landscape. Former timber operations are evident from the small size of most hardwood trees. Dead chestnut stumps bear witness to the dreaded chestnut blight which swept the forests during the early 1900's.

Various modes of communication will be utilized to convey the interpretive theme to the general public. Appropriate signs and outdoor displays should prove beneficial, particularly at High Shoals Falls and the interpretive shelter. The geology and peculiar vegetation in the High Shoals Falls area could best be interpreted in the proposed shelter. Brochures about these various topics would also provide a desirable service for park visitors.

The park naturalist will develop slide shows to cover such topics as geology, biology, past land use and history. He will also lead guided tours for small groups to selected sites in the park.

ARCHAEOLOGY

No systematic archaeological survey has been conducted at South Mountains State Park. As a result, very little archaeological information is available, and no pre-historic habitation sites have been identified within the park. Due to the limited amount of physical construction and lack of soil disturbing activities this will be little hinderance to the park's development. However, in order to portray and interpret the park completely, a survey to determine the cultural significance of the park is necessary.

A comprehensive Environmental Impact Statement should be developed which contains a complete description of any significant archaeological sites. This would result in a more thorough and complete interpretive effort and provide the necessary tools for development of the park's interpretive program.

DEVELOPMENT PHASING

PHASE I (INTERIM)

A. FACILITIES

Picnic Area (relocate)
12 tables
2 pit toilets (temporary)
1 water source

Parking
54 spaces (includes 18 horse parking spaces)

Group Primitive Camp (Chestnut Knob)
12 tent sites
2 pit privies
1 water source

Family Primitive Camps
Shinny Creek Camp (to remain temporarily)
8 tent sites (temporary)
1 pit privy (temporary)

Murray Branch Camp
8 tent sites
1 pit privy
1 water source

Horse Camp
6 tent sites
1 pit privy
1 water source
12 tie racks

High Shoals Falls
Stairway construction
2.0 mile interpretive trail
Interpretive shelter (to replace existing primitive camp).

Hiking Trails
22.5 miles

Horse Trails
11.5 miles

Road Improvements
1.4 miles access road improvements

Land Acquisition
220 acres

B. STAFFING

Permanent: Park Ranger II (existing)
Seasonal: Park Attendant (six months) (existing)
Temporary: Labor Support (as needed)

PHASE II

A. FACILITIES

Picnic Area (expansion)
10 tables (additional)
1 toilet building with water source

Parking
40 overflow spaces

Group Primitive Camp (Rich Mountain)
12 tent sites
2 pit privies
1 water source

Family Primitive Camp (Murray Branch)
7 tent sites (additional)
1 pit privy (additional)

High Shoals Falls
Interpretive Trail Improvements
interpretive signs
construct boardwalk segments

Bear Oak Area
½ mile interpretive trail
Interpretive display

Horse Trail
4.0 miles (to Benn's Knob)

Hiking Trails
3.7 miles (to Rich Mountain Group Camp, Benn's Knob)

Land Acquisition
1240 acres

B. STAFFING

Permanent: Park Superintendent I
Seasonal: Naturalist
Temporary: Labor Support (as needed)

PHASE III

A. FACILITIES
- Picnic Area (expansion)
  - 10 tables (additional)
- Family Primitive Camp (Possum Trail)
  - 8 tent sites
  - 1 pit privy
  - 1 water source
- Horse Camps
  - 6 tent sites (additional)
  - 1 pit privy (additional)
  - 12 tie racks (additional)
- Tent and Trailer Camp
  - 23 sites
  - 1 toilet building with water source
- Horse Trailhead
  - 24 vehicle and trailer parking spaces
  - 12 horse tie racks
- Hiking Trails
  - 4.6 miles (additional Little River Trail, Short Road, Little High Shoals Falls
  - 3.7 miles to be replaced by hiking trail) Possum Trail, New High Shoals Road
- Land Acquisition
  - 845 acres (Nettle Branch Watershed)
  - 310 acres (Jacob's Fork Lake Site)

B. STAFFING
- Permanent: Park Ranger I
- Seasonal: Park Attendant (3 months)
- Temporary: Labor Support (as needed)

PHASE IV

A. FACILITIES
- Picnic Area
  - 1 group picnic shelter (60 person capacity — 8 tables; to replace existing maintenance shed)
- Family Primitive Camp (Possum Trail)
  - 7 tent sites (additional)
  - 1 pit privy (additional)
- Lake Complex
  - 32 acre lake
  - 10,000 sq. ft. sand beach
  - 1 bathhouse (with snack bar)
  - 1 boathouse and dock
  - 16 rowboats and 8 canoe capacity
- Parking
  - 101 spaces
- Office/Maintenance Center
  - 12 parking spaces
- Ranger Residences
  - 2 new residences (existing residence to remain)
- Barracks
  - 8 person capacity
- Hiking Trails
  - 7.4 miles (additional) Nettle Branch, Lake Trail
- Horse Trails
  - 4.8 miles (additional) Fox Trail Extension to Dogwood Trail and Dogwood Trail

B. STAFFING
- Permanent: Park Superintendent II (up-graded)
  Maintenance Mechanic II
  Typist Clerk (½ Time)
- Seasonal: Chief Life Guard
  Life Guards (4)
  Refreshment Stand Manager
  Refreshment Stand Clerk
  Bathhouse Manager
  Bathhouse Operator
  Recreator
- Temporary: Labor Support (as needed)

PARK UTILITIES

Electricity and telephone services are available through Rutherford Electric Membership Corporation and Southern Bell, respectively. Lines for both power and telephone currently run to the existing park offices and ranger residence. All future lines within the park's property will run underground, preferably within the park road right-of-way.

Water will probably be supplied most suitably by a series of strategically located wells in or near the park's various use areas. Deeper wells can be expected to yield between 10 and 30 gallons per minute, depending upon location (except higher ridges). Shallow wells will likely yield up to 5 gallons per minute. The latter are preferable in the more isolated use areas, particulary the primitive camps.

Through the earlier phases of park development, sewage will have to be handled by a series of septic fields near each developed area with flush-type sanitary facilities. Common septic fields may suffice for use areas within reasonable distances of each other. However, completion of Phase IV development may justify a central sewer system for all park use areas between the picnic area and park gate. All sewer lines must be located so as to limit any environmental damage, preferably within the park road right-of-way.

PHASE I (Interim)

Picnic Area
- Water Source — 450 gal/day (hand pump)

Group Primitive Camp (Chestnut Knob)
- Water Source — 250 gal/day (hand pump)

Family Primitive Camp (Murray Branch Camp)
- Water Source — 160 gal/day (hand pump)

Horse Camp
- Water Source — 250 gal/day (hand pump)

PHASE II

Picnic Area
Toilet Building/Water Source — 3,400 gal/day with septic system or sewer and electricity

Group Primitive Camp (Rich Mountain)
Water Source — 250 gal/day (hand pump)

Family Primitive Camp (Murray Branch Camp)
Water Source — 140 gal/day (additional)

PHASE III

Family Primitive Camp (Possum Trail)
Water Source — 160 gal/day (hand pump)

Tent and Trailer Camp
Toilet Building/Water Source — 700 gal/day with septic system or sewer and electricity

Horse Camp
Water Source — 250 gal/day (additional)

PHASE IV

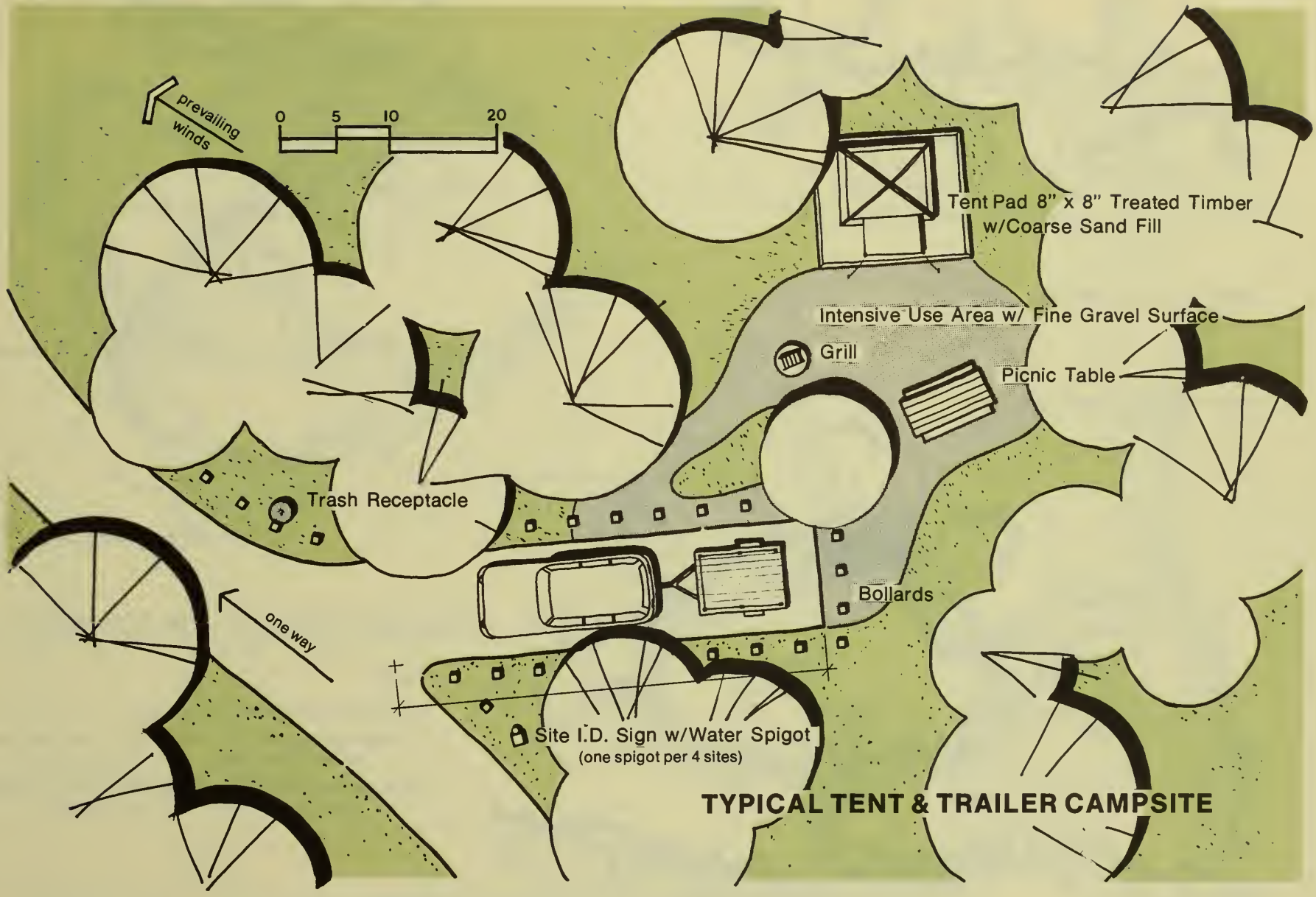
Lake Complex
Bathhouse/Concession — 3,000 gal/day with septic system or sewer, telephone and electricity

Park Office/Maintenance Center
Water supply and sanitary facilities — 1,000 gal/day with septic system or sewer, telephone and electricity

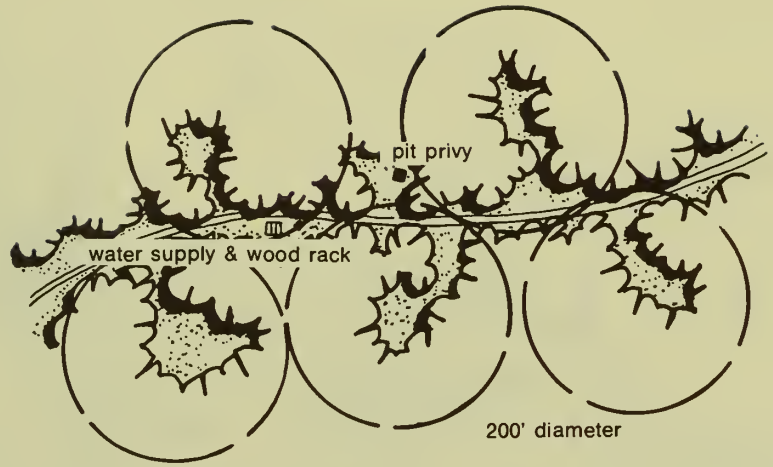
Ranger Residence
Water supply and sanitary facilities — 200 gal/day (each) with septic system or sewer, telephone and electricity

Barracks
Water supply and sanitary facilities — 400 gal/day with septic system or sewer, telephone and electricity

APPENDIX



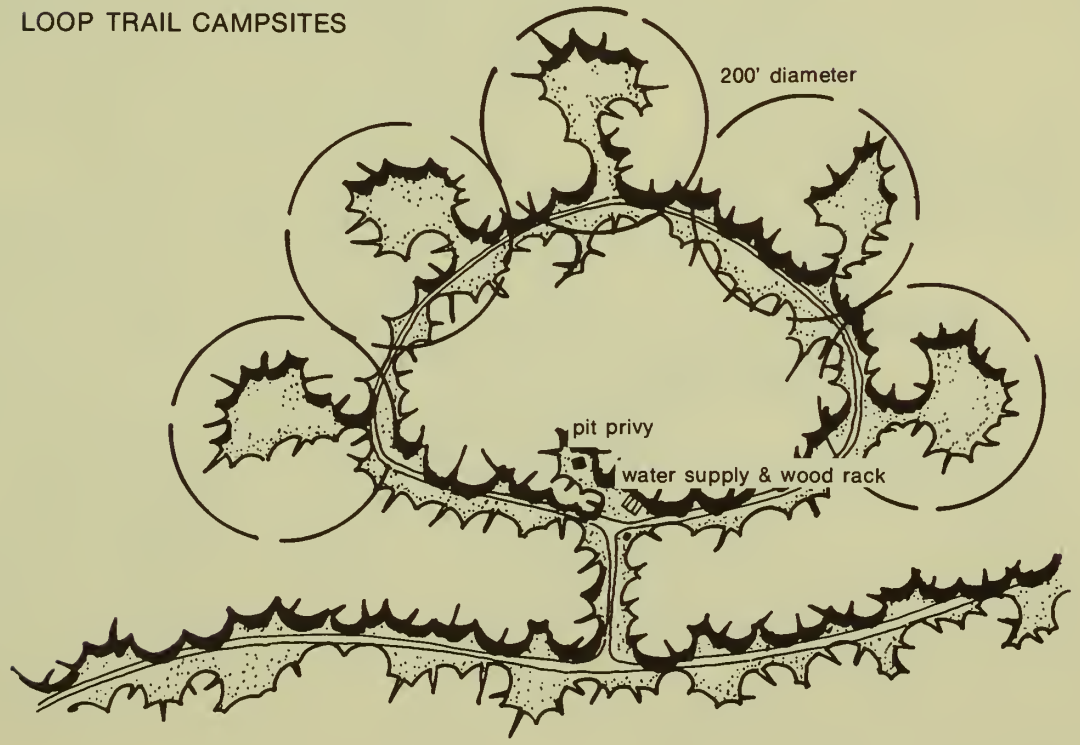
TYPICAL TENT & TRAILER CAMPSITE



MAIN TRAIL CAMPSITES

SPUR TRAIL CAMPSITES

LOOP TRAIL CAMPSITES



NOTES:

Each campsite will have a fire circle

Campsite location will be a minimum of 25' from spur trail and 50' from main trail.

Vault-type toilet could be substituted for pit privy if vehicular access is provided. Max. 20' from trail.

NO SCALE

PRIMITIVE FAMILY CAMPS (typical)

PRIMITIVE HORSE CAMP (typical)

NO SCALE

NOTES:

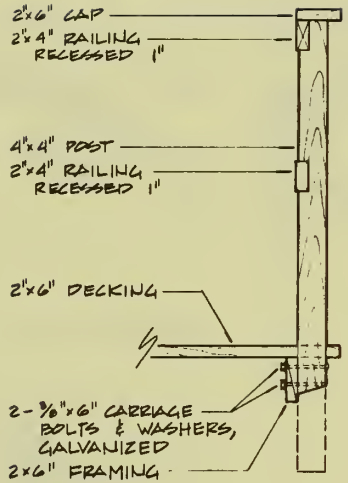
A minimum distance of 300' should be maintained between tie racks and campsites

Pit privy could be replaced with a vault-type toilet if vehicular access is maintained

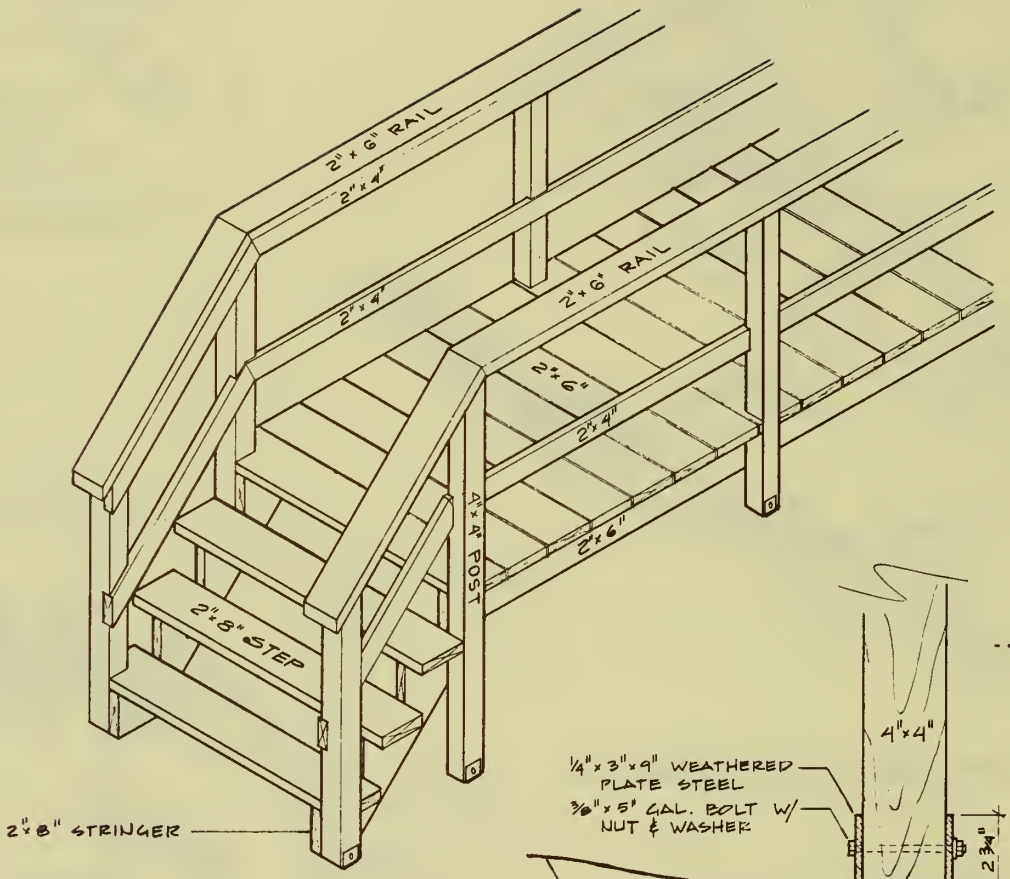
Each campsite will have a fire circle

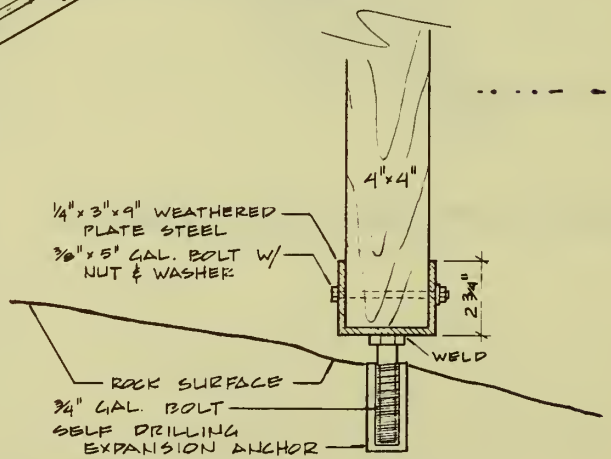
NO SCALE

GROUP PRIMITIVE CAMP (typical)



RAILING DETAIL
SECTION NO SCALE



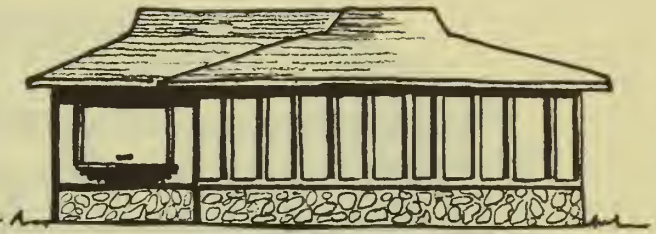


ROCK ANCHOR DETAIL
SECTION NO SCALE

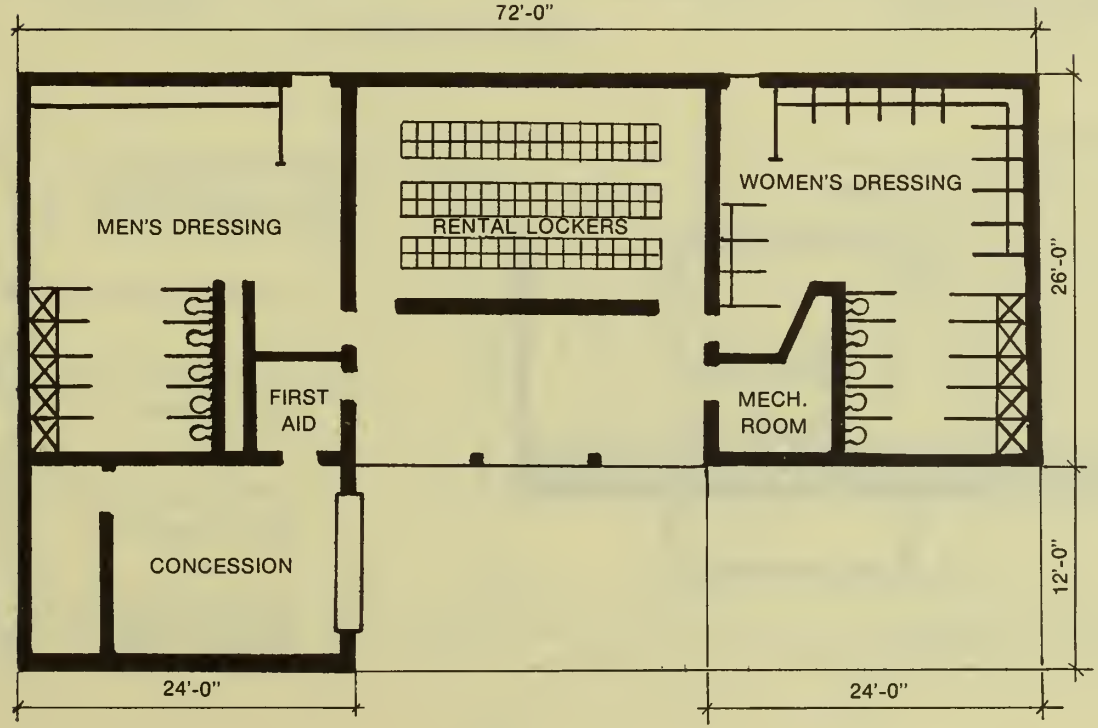
NOTES:
- ALL WOOD COMPONENTS TO BE 0.4 lb, CCA TREATED
- FASTENERS TO BE 16d GAL. NAILS UNLESS OTHERWISE SPECIFIED

HIGH SHOALS FALLS STAIRWAY

FRONT ELEVATION



SIDE ELEVATION

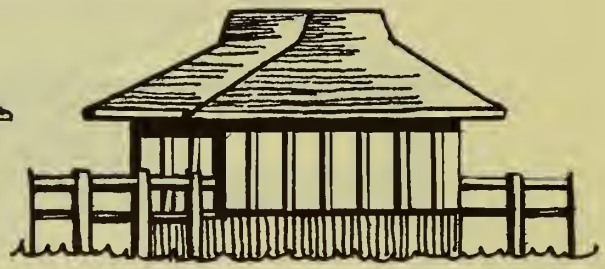


PLAN

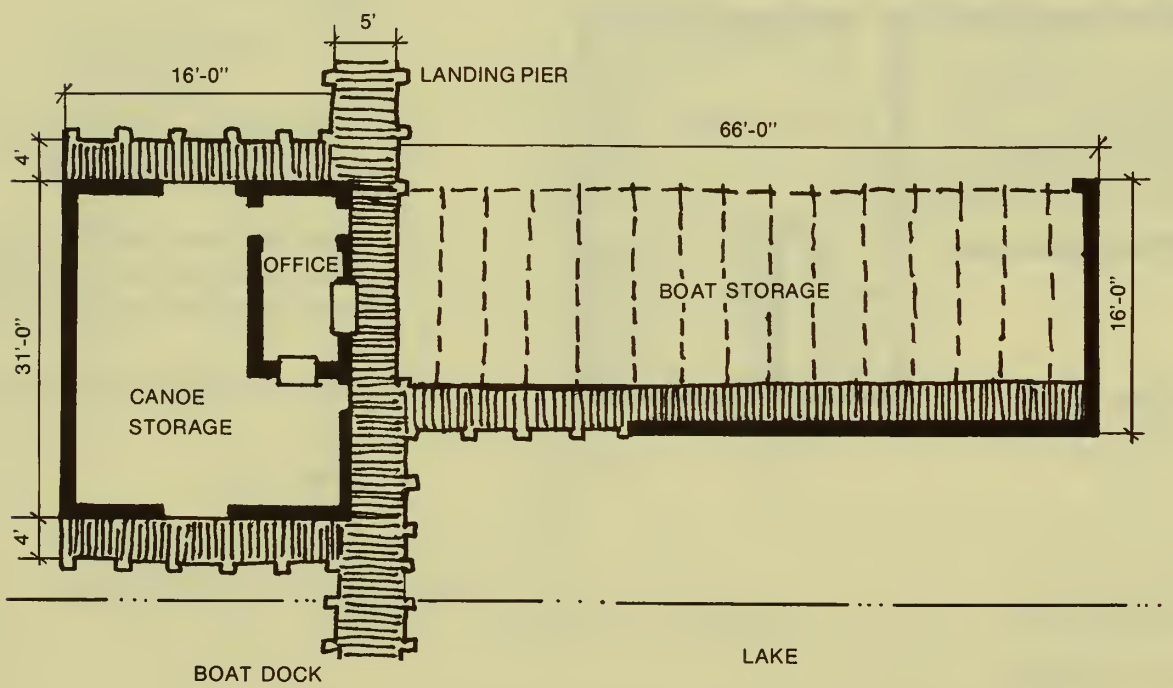
BATHHOUSE for SWIMMING AREA (80 park sp.)

- Concrete block construction faced with stone (lower 3') and board & batten or textured plywood (upper exterior walls).
- Cedar shake roof or equivalent material
- 2160 sq. ft.

FRONT ELEVATION



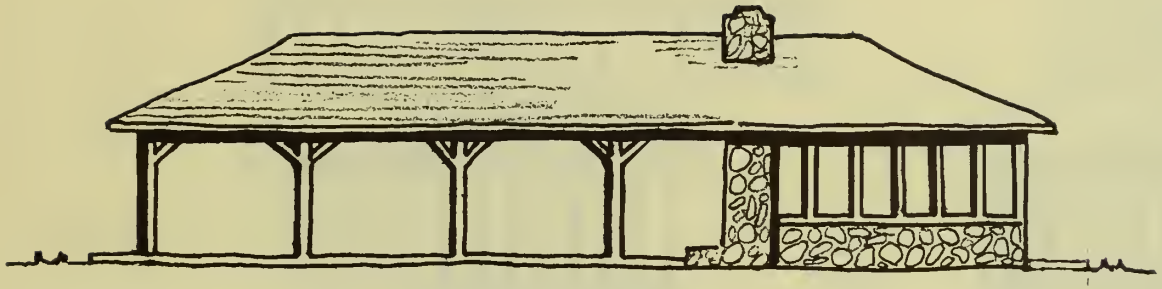
SIDE VIEW



PLAN

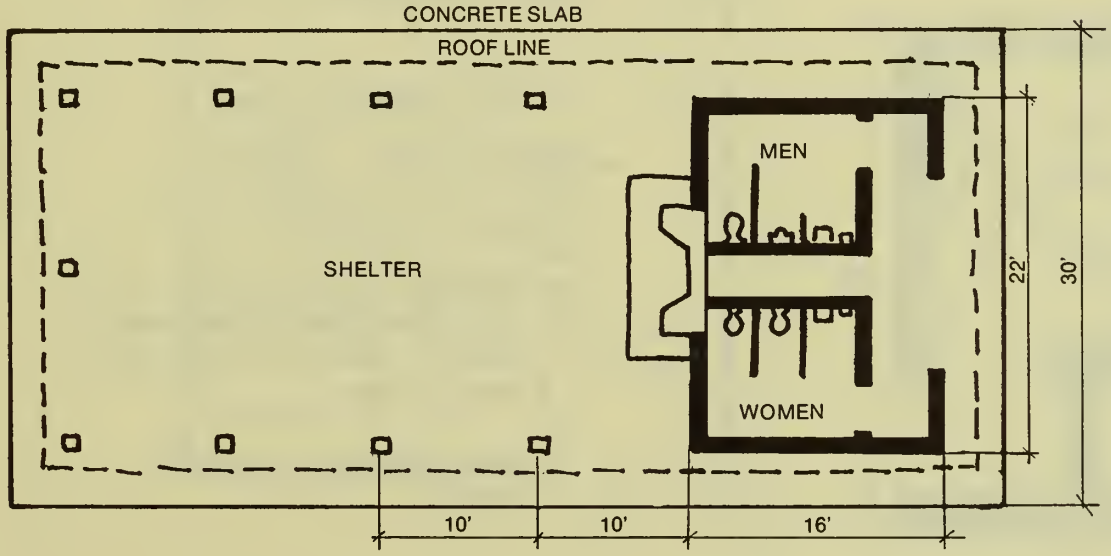
BOATHOUSE for SWIMMING AREA

- 16 Boat storage spaces
- Concession office with storage for 8 canoes
- Landing pier — 20 linear feet, 5 feet wide
- Board & batten or textured plywood finish



FRONT ELEVATION

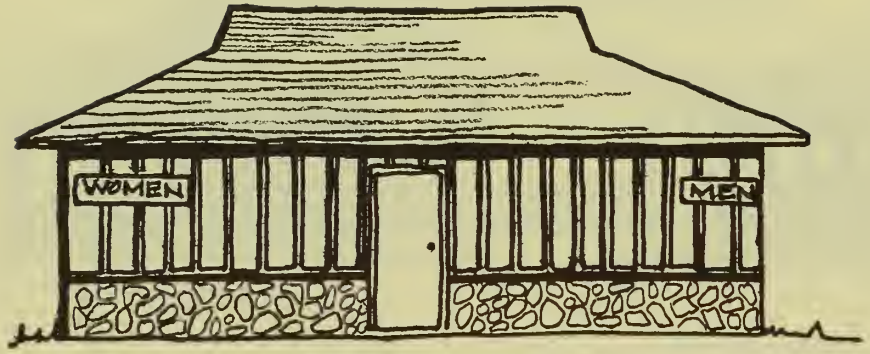
SIDE ELEVATION



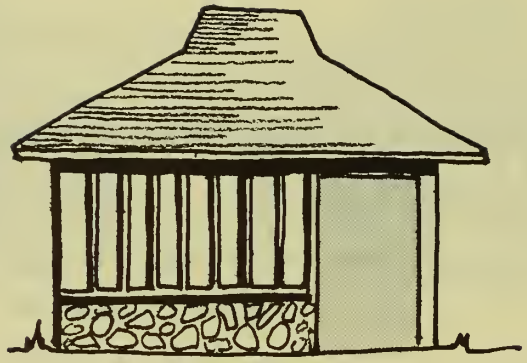
PLAN

GROUP SHELTER & TOILET BUILDING

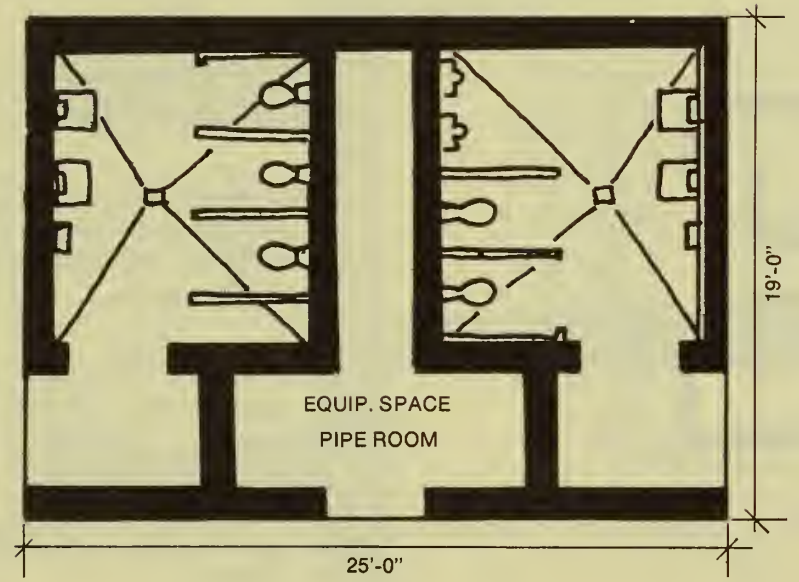
- Concrete block construction faced with stone (lower 3') and board & batten or textured plywood (upper exterior walls).
- Shelter — 800 square feet and toilet building with six fixtures
- Stone fireplace
- Cedar shake roof or equivalent material



FRONT ELEVATION



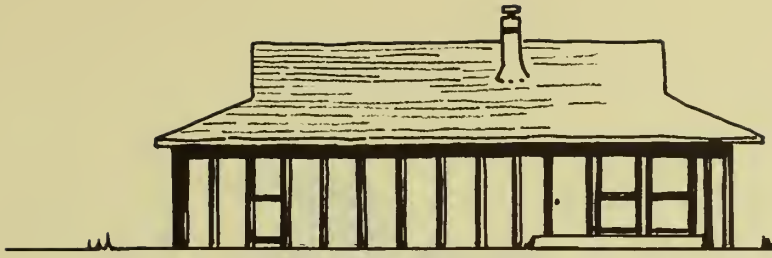
SIDE VIEW



PLAN

TOILET BUILDING FOR PICNIC AREA (32 tables)

- Eleven water fixtures
- Concrete block construction faced with stone (lower 3') and board & batten or textured plywood (upper exterior walls).
- Cedar shake roof or equivalent material



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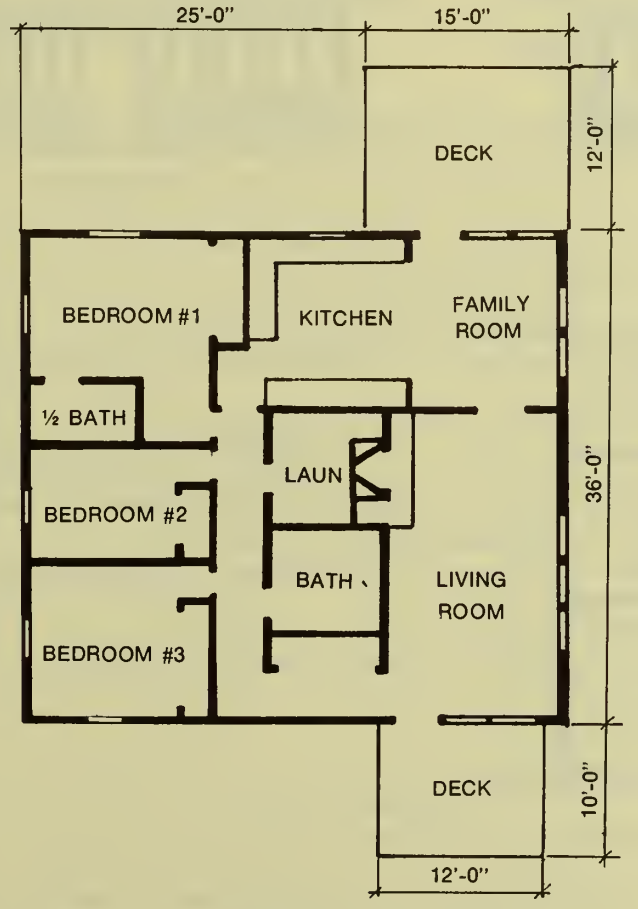
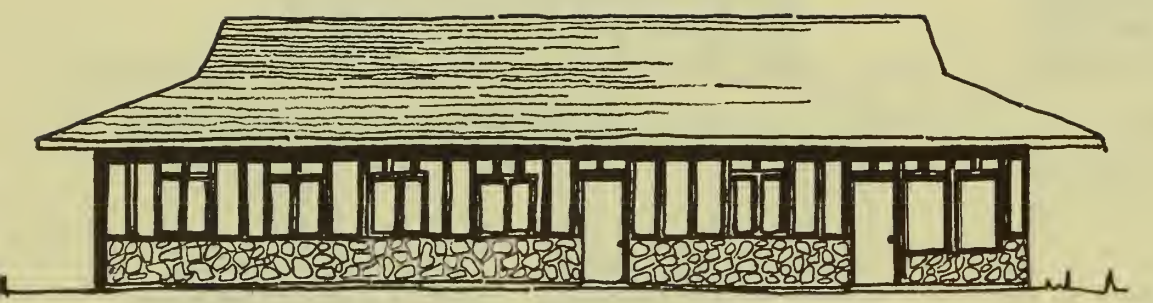
SIDE VIEW



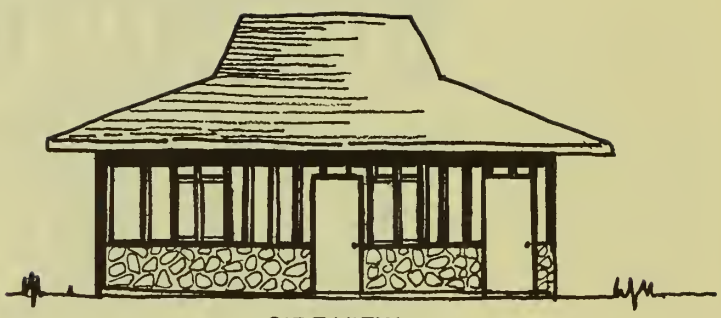
PLAN

RANGER RESIDENCE

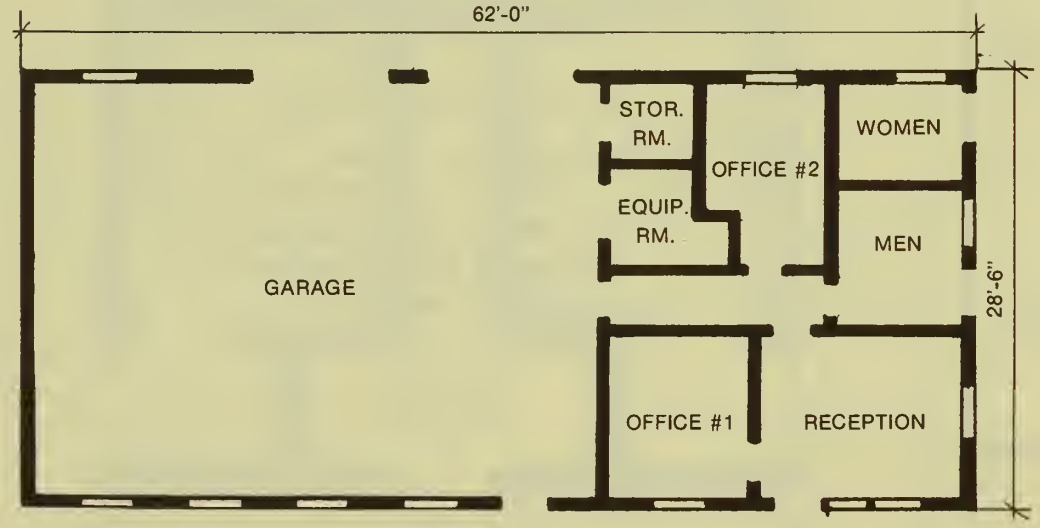
- 3 bedrooms
- 1½ baths
- Concrete block construction with board & batten or textured plywood finish



FRONT ELEVATION



SIDE VIEW



PLAN

OFFICE/MAINTENANCE BUILDING

- Concrete block construction faced with stone (lower 3') and board & batten or textured plywood (upper exterior walls).
- Cedar shake roof or equivalent material
- 1975 sq. ft. garage

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Thomas R. Wells, Site Management Planner
John S. Taggart, Site Management Consultant
James M. Page, NRCD Photographer

Bear Oak Area

IVY CREEK TRAIL

HORSE RIDGE TRAIL

LITTLE RIVER TRAIL

UPPER CCC ROAD

Group Primitive Camp

Family Primitive Camp

SAWTOOTH TRAIL

POSSUM TRAIL

Residence

Family Picnic Area

Parking Lot

Swimming
Fishing
Boating

Horse Trailhead

Office/Maintenance

LAKE (32 acres)

Tent & Trailer Camp
(23 sites)

Residences

Park Entrance

HIGH SHOALS TRAIL

Horse Camp

High Shoals Falls

CLIFF ROAD

Interpretive Center

FOX TRAIL

Family Primitive Camp

CHAPMAN TRAIL

Group Primitive Camp

DOGWOOD TRAIL

LOWER CCC ROAD

LEGEND

PARK BOUNDARY

ROAD

HORSE TRAIL

HIKING TRAIL

PROPOSED ACQUISITION

master plan

SOUTH MOUNTAINS STATE PARK

burke & cleveland counties, north carolina

north carolina division of parks & recreation

0 800 1600 3200 feet

0 250 500 1000 meters

NCDPR – GMP Section - 0011